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HIV-RELATED SEXUAL RISK BEHAVIOUR, PARENTING STYLES AND SOCIO-ECONOMIC STATUS IN SOUTH AFRICAN ADOLESCENTS

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ABSTRACT

With increasing rates of HIV prevalence in South Africa, research focus is on examining factors that may affect HIV-related sexual risk behaviour, especially in adolescents. Two such factors, parenting styles and socio-economic status (SES) have been highlighted. Despite remarkable consistence in parenting style research, with the authoritative parenting style reliably associated with positive outcomes, the applicability of this model in diverse contexts is questioned given that the majority of this research was conducted in White, middle-class populations. Both parenting practices and SES have produced some inconsistent results in relation to sexual risk behaviours; where results have been dependable, they have failed to account for the mechanisms influencing such relationships. The current study aimed to determine if the documented parenting styles – and SES - sexual risk behaviour relationships could be found in 366 South African adolescents. The study also explored parenting style as a moderator and/or a mediator in the SES – sexual risk behaviour relationship, and SES as a moderator on the parenting style – sexual risk behaviour model. The participants completed adapted self report questionnaires (Parenting Style Index (PSI) and Adolescent Sexual Risk Behaviour Questionnaire) and a self-developed biographical questionnaire. Both the parenting styles – sexual risk behaviour and the SES – sexual risk behaviour relationships were found ($r = -.21$ and $-.24$ respectively, $p < .0001$). While the mediation model was disproven, SES and parenting style were both found to act as moderators ($F_{6, 363} = 2.15$, $p = .0469$). These results are valuable in terms of providing knowledge that may help to develop relevant and effective sexual risk behaviour intervention programmes, as well as adding richness to the current fields of parenting style, and sexual risk behaviour research.

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CHAPTER ONE: INTRODUCTION

AIM

In the last half century, a great deal of research has emerged in North America and Europe exploring the relationship between sexual risk behaviours and a host of supposed contributing factors that purport to explain these behaviours (Baptiste et al., 2006; Buhi & Goodson, 2007; Eaton, Flisher & Aaro, 2003; Henrich, Brookmeyer, Shrier & Shahr, 2005; Heubner & Howell, 2003; Jessor, 1991; Kabiru & Orpinas, 2008; Kotchick, Shaffer, Miller & Forehand, 2001; Luster & Small, 1994; Miller, Forehand & Kotchick, 1999; Nii-Amoo Dodoo, Zulu & Ezech, 2007; Patrick et al., 2010; Ramirez-Valles, Zimmerman & Newcomb, 1998; Smith, 2006; Upchurch, Aneshensel, Sucoff & Levy-Storms, 1999; Wellings et al., 2001). This research has produced inconsistent results and, while some studies have managed to demonstrate evidence of links between sexual risk behaviours and several factors such as socio-economic status, parenting practices and peer influence, the mechanisms behind these links remain unclear (Baumer & South, 2001; Bradley & Corwyn, 2002; Henrich et al., 2005; Heubner & Howell, 2003; Miller et al., 1999; Nyamboli, 2009; Ramirez-Valles et al., 1998; Santelli, Lowry, Brener & Robin, 2000; Taris & Semin, 1998).

In addition, relationships that have been suggested and empirically substantiated in much of the literature have generated controversy surrounding their cross cultural applicability (Amato & Fowler, 2002; DeVore & Ginsburg, 2005; Thurman, Brown, Richter, Maharaj & Magnani, 2006). These relationships may be culturally- and/or contextually-bound and may fail to account for any potential differences that may occur in more heterogeneous samples.

This study aimed to determine the possible existence and nature of the relationship between HIV-related sexual risk behaviour, different parenting typologies and socio-economic status (SES) in South African adolescents. The study further aims briefly to consider additional, participant-specified factors that may contribute to HIV-related sexual risk taking behaviours in these students. The study aims to explore these factors and relationships both quantitatively and qualitatively through the administration of questionnaires to adolescent student populations in differing SES contexts.

RATIONALE

In the last half century, with the escalation of the Human Immunodeficiency Virus (HIV) pandemic and related negative health consequences, increasing interest has developed in examining HIV-related sexual risk behaviours, with a focus on adolescents (Eaton et al., 2003; Kotchick et al., 2001; Miller et al., 1999; Thurman et al., 2006; Wellings et al., 2001). This research has shown growing levels of youth sexual activity and risk behaviour. Statistics reveal that 67% of South African youth aged 15-24 are sexually active, i.e. have had sexual intercourse (Patrick et al., 2010; Wang, 2009), with 48% of 15-19 year olds reported as sexually experienced, that is, engage in frequent intercourse (Wang, 2009). In addition, 27% of these youths report having more than one sexual partner at a time (Eaton et al., 2003). The majority of youth report irregular condom use, with 31% reporting no condom use at all (Eaton et al., 2003). These statistics are alarming in light of the fact that countries in Sub-Saharan Africa demonstrate the highest prevalence of HIV infection, 80% of which is transmitted through unprotected heterosexual intercourse (Dallabetta et al., 1993; Nyamboli, 2009; Smith, 2006; Wojcicki, 2005). In particular, South Africa represents the highest infection rate in the world with 15% of the global total number of HIV-positive people residing in South Africa (Crosby, 2006; Patrick et al., 2010). Further, 25% of this infected population is under 25 years old, and AIDS is the cause of 71% of deaths in the 15-49 age group (Patrick et al., 2010). The most recent approximations as explored by the 2008 National HIV Survey demonstrated that the estimated HIV positive prevalence in the 15-24 age group is 8.7% (AVERT, 2008).

These statistics highlight the importance of exploring and understanding the mechanisms behind youth sexual behaviours that place them at risk for HIV and STD infection in order to be able to develop sustainable and effective sexual health and HIV awareness/HIV prevention programs (Eaton et al., 2003; Kilian et al., 1999; Miller et al., 1999; Patrick et al., 2010; Tladi, 2006). It is essential to determine the social and economic factors that influence sexual risk behaviour in order to establish methods of changing these behaviours (Tladi, 2006).

The current scholarship that has attempted to examine factors related to sexual risk behaviour in adolescents has confirmed the complexity of these relationships (Baumer & South, 2001; Bradley & Corwyn, 2002; Henrich et al., 2005; Miller et al., 1999; Santelli et al., 2000). Many of the examined factors, such as SES and parenting process variables, have produced inconsistent results across studies (Baumer & South, 2001; Buhi & Goodson, 2007; Heubner & Howell, 2003; Miller et al., 1999;

Santelli et al., 2000; Wojcicki, 2005). This discrepancy highlights the need for further exploration of these constructs (Wojcicki, 2005). Many studies which have provided empirical evidence for links between sexual risk behaviour and contributing factors have stressed the need for research to explain these relationships (Baumer & South, 2001; Julian, McKenry & McKelvey, 1994; Kotchick & Forehand, 2002; Roche et al., 2005; Taris & Semin, 1998).

Further, parenting processes have rarely been examined in the South African context (Bronstein et al., 1996; Suldo & Heubner, 2004). This is especially noteworthy in light of the fact that there is a significant possibility that parenting styles may interact differently with variables in the South African context, when one considers the prevalence of rural to urban migration often contributing to the absence of parents, parental figures or adult household heads, the resultant frequency of caregivers being extended family such as aunts, siblings or grandparents and the pervasive existing cultural differences owing to our heterogeneous population (Amoateng, Richter, Makiwane & Rama, 2004; Cox, Hemson & Todes, 2004).

The current governmental and non-governmental programs in place in South Africa regarding HIV awareness and prevention, and sexual health awareness, are focused mainly at an individual level and do not incorporate family and environmental variables despite the research into these factors in many contexts, both international and local (Baptiste et al., 2006; DeVore & Ginsburg, 2005; Kotchick & Forehand, 2002; Newman, Harrison, Dashiff & Davies, 2008; Tladi, 2006; Wojcicki, 2005). This research may provide potential for real world awareness and prevention interventions in the form of skills courses for parents should a constellation of traits appear to be related to reduced levels of sexual risk-taking behaviours.

SUMMARY AND THE CURRENT STUDY

With the increasing rates of HIV prevalence in South Africa and indeed, globally, research focus has narrowed to examine the factors that may affect HIV-related sexual risk taking behaviours (Eaton et al., 2003; Kotchick et al., 2001; Miller et al., 1999; Thurman et al., 2006; Wellings et al., 2001). This research has been particularly aimed at adolescents and young adults, as these groups are experiencing high growth in HIV-infection rates. Such related factors appear to include peer pressure, family environments (physical in terms of socioeconomic status, family structure, geographic location and so on, and emotional in terms of parent practices and the transfer of moral and value beliefs), internal motivators or deterrents, the role of media and popular culture as well as socialised gender roles and cultural practices (Baptiste et al., 2006; Buhi & Goodson, 2007; Eaton et al., 2003; Henrich et al., 2005; Heubner & Howell, 2003; Jessor, 1991; Kabiru & Orpinas, 2008; Kotchick et al., 2001; Luster & Small, 1994; Miller et al., 1999; Nii-Amoo Dodoo et al., 2007; Patrick et al., 2010; Ramirez-Valles et al., 1998; Smith, 2006; Upchurch et al., 1999; Wellings et al., 2001).

Two of these factors, namely parenting practices (particularly parenting *styles*) and family and neighbourhood socio-economic status have been considered in the current study. Parenting style research has been remarkably consistent, with the authoritative parenting style reliably associated with positive outcomes for children and adolescents (Bower, 1989; Bronstein et al., 1996; DeVore & Ginsburg, 2005; Newman et al., 2008; Weiss & Schwarz, 1996). However, the majority of this research was conducted in White¹, middle-class populations and, as such, its applicability across more diverse groups has been questioned (Amato & Fowler, 2002; DeVore & Ginsburg, 2005; Thurman et al., 2006). Further, parenting practices in relation to HIV-related sexual risk behaviours have produced some inconsistent results, with associations differing by gender and, where results have been dependable, have failed to account for the mechanisms influencing such a relationship (Baumer & South, 2001; Buhi & Goodson, 2007; Heubner & Howell, 2003; Miller et al., 1999; Santelli et al., 2000). Similarly, research centring on socioeconomic status (SES) and sexual risk behaviour has found inconsistent and conflicting associations, with some studies finding no relationship between the constructs, and others variously finding a low SES – high sexual risk behaviours link and a high SES – high sexual risk behaviours link (Wojcicki, 2005). Again in these associations, the mechanisms behind the links found have been unclear.

¹ While this thesis uses the terms Black, White, Indian, Coloured, and Asian, it is recognised that these are “socially constructed labels associated with apartheid-era population classification that served particular political purposes. The use of these terms and constructs in no way implies any acceptance of the racist assumptions on which these labels are based” (Duncan, Bowman, Stevens & Mdikana, 2007, p181).

Given the above issues, the current study has attempted to examine the possibility of a relationship between both parenting styles and HIV-related sexual risk taking behaviours, and SES and HIV-related sexual risk taking behaviours. The study has also attempted to consider the proposal that parenting style may act as a moderator and/or a mediator in the SES – risk behaviour relationship, and equally that SES may act as a moderator on the parenting style – risk behaviour model. This was examined in an ethnically heterogeneous sample of South African high school students from differing SES backgrounds, and the impact of factors such as the identity and age of the caregiver, as well as various demographic factors were considered. Finally, the study briefly explored the possibility of additional motivations for and against engaging in HIV-related sexual risk taking behaviours in an attempt to acknowledge the multifaceted aetiological nature of such behaviours.

CHAPTER TWO: LITERATURE REVIEW

SEXUAL RISK BEHAVIOUR

Since the 1970s, increasing interest has developed into the prevalence and extent of the construct 'sexual risk behaviour' (cf. Baptiste et al., 2006; Buhi & Goodson, 2007; Eaton et al., 2003; Henrich et al., 2005; Heubner & Howell, 2003; Jessor, 1991; Kabiru & Orpinas, 2008; Kotchick et al., 2001; Luster & Small, 1994; Nii-Amoo Dodoo et al., 2007; Patrick et al., 2010; Ramirez-Valles et al., 1998; Smith, 2006; Upchurch et al., 1999; Wellings et al., 2001). This interest has developed into a focus on adolescent and young adult populations and has generated research with the particular aim of documenting the percentage of youth engaging in sexual behaviour that has the risk of resultant negative health consequences. A primary outcome of this research is concern about the definition of the term 'sexual risk behaviour' (Heubner & Howell, 2003; Nyamboli, 2009). In a disproportionate amount of the literature, the construct referred simply to the act of having engaged in sexual intercourse (Ellis et al., 2003; Langille, Curtis, Hughes & Tomblin Murphy, 2003; Wight, Williamson & Henderson, 2006). This limiting one-factor usage unfortunately remained the practiced definition until the idea of healthy sexual development versus risk behaviours arose (Heubner & Howell, 2003). This debate argued that sexual development in adolescence is normal and healthy, and that to categorise sexual intercourse during adolescence as a risk behaviour without taking into account additional mitigating factors is not useful (Heubner & Howell, 2003). This reasoning may then cast some doubt on the validity of research, previous to the debate, that defined having intercourse as a sexual risk behaviour. Indeed, as there exist current studies that continue to use this definition despite the afore-mentioned concerns, it is imperative to question the motives behind this usage in recent scholarship and consider the validity and relevance of studies using this classification.

A primary explanation for this usage may be an extant focus on behaviours relating to the risk for unplanned pregnancy as opposed to risk for HIV infection (Ellis et al., 2003). However, due to the current climate of escalating HIV/AIDS related incidences in youth under age 25, the focus on behaviours associated with high risk for STI and HIV infection is increasing (Eaton et al., 2003; Kilian et al., 1999; Kotchick et al., 2001; Patrick et al., 2010; Smith, 2006; Whaley, 1999). As a result of this, and of the normalising sexuality debate, the term sexual risk behaviour has become a multifaceted concept; sexual risk now involves behaviours such as early sexual debut, multiple partners, the frequency of sexual intercourse under the influence of alcohol/drugs, the trade of sexual activities for goods or money, sexually transmitted infection (STI) contraction and frequent and unprotected

intercourse (Eaton et al., 2003; Henrich et al., 2005; Santelli et al., 2000). The relevance of early sexual debut is demonstrated by its' association with an increase in number of sexual partners and decreased condom use (Kotchick et al., 2001). 'Sexual risk behaviour' in the current study will encapsulate the majority of the above listed behaviours and, given the current climate of mounting HIV/AIDS contraction in youth populations, be linked specifically to the idea of behaviours which increase the risk for HIV and STD infection. As a result, the terms sexual risk behaviour/sexual risk taking henceforth will refer in this paper to those behaviours that increase one's risk of contracting HIV/STDs.

Researchers who have attempted to examine the factors that contribute to or explain these risk behaviours have produced a plethora of inconsistent findings (Baumer & South, 2001; Bradley & Corwyn, 2002; Henrich et al., 2005; Heubner & Howell, 2003; Miller et al., 1999; Nyamboli, 2009; Ramirez-Valles et al., 1998; Santelli et al., 2000; Taris & Semin, 1998). Many factors have been identified that have been shown to explain adolescent sexual risk behaviour in one study but to have no effect on it in another (Booyesen & Summerton, 2002; Heubner & Howell, 2003; Miller et al., 1999; Santelli et al., 2000; Wojcicki, 2005). Those studies that do suggest a relationship between risk behaviour and any particular factor range in the suggested amount that each factor contributes to understanding HIV-related sexual risk taking and also put forward uncertainties about the mechanisms behind any such relationships (Baumer & South, 2001; Bradley & Corwyn, 2002; Santelli et al., 2000; Taris & Semin, 1998). Some of the suggested contributing or explanatory variables include family process variables such as monitoring, communication, trust and control (Baumer & South, 2001; Miller et al., 1999; Ramirez-Valles, 1998; Upchurch et al., 1999) family structure variables, with particular focus on parental marital status (Kotchick et al., 2001; Miller et al., 1999; Ramirez-Valles, 1998; Upchurch et al., 1999), peer influences (Baumer & South, 2001; Patrick et al., 2010), socio-economic influences, [namely maternal education levels (Langille et al., 2003; Miller et al., 1999; Ramirez-Valles, 1998), parental income and neighbourhood socio-economic factors such as poverty, crime and ethnic breakdown] (Baumer & South, 2001; Tladi, 2006), and finally, race, gender and culture (Baumer & South, 2001; Eaton et al., 2003; Kotchick et al., 2001; Miller et al., 1999; Patrick et al., 2010; Ramirez-Valles, 1998; Tladi, 2006; Upchurch et al., 1999; Wight et al., 2005). Two of the most inconsistent factors, and the variables that are the focus of the current study, are parenting influence and SES, and will be discussed below, both generally and then in specific relation to sexual risk behaviour.

SOCIO-ECONOMIC STATUS (SES)

Socio-economic status (SES) is an increasingly relevant measure that appears to affect a number of variables and relationships across both the developed and developing worlds (Ramirez-Valles, 1998; Lantz et al., 2001; Nii-Amoo Dodoo, 2007; Wojcicki, 2005). However, results surrounding SES are difficult to compare across studies due to the inconsistency in the way it has been measured. SES, either a measure of prestige (social position) or a measure of social class, can be determined as annual/monthly income, education level, value of owned household goods such as a refrigerator, or as different degrees of access to running water, electricity, toilet types or number of rooms in one's house (Bradley & Corwyn, 2002; Fernald, 2007; Langille et al., 2003; Lantz et al., 2001; Zere & McIntyre, 2003). These different measures, with no particular one claiming greater reliability, unfortunately result in inconsistent findings across studies (Wojcicki, 2005). Progressively, research is beginning to include a measure of the neighbourhood SES as well as individual family SES, particularly in development studies, in an attempt to take into account broader external environmental factors that may be affecting child and adolescent outcomes (Baumer & South, 2001). As a result, neighbourhood SES will be considered in this study, using the Department of Education (DoE) quintile classification system as outlined in the sampling section to follow.

SES is an acutely relevant issue in the South African context (Nii-Amoo Dodoo et al., 2007; Wojcicki, 2005). As a result of the benefits, for some sectors of the population, of globalisation and South Africa's increasing GDP, the within-population differences in SES are increasing (Wojcicki, 2005). South Africa, with a gross national product (GNP) per capita of \$3020, is one of the wealthiest countries in Africa, while simultaneously home to many citizens who are living below the poverty line on less than US\$1/day (Nii-Amoo Dodoo et al., 2007; Wojcicki, 2005). In addition, the 2007 Community Survey conducted by Statistics South Africa (2008) suggests that less than 50% of South Africans have access to piped water inside their homes, 37.5% use a pit latrine, bucket toilet or have no toilet at all and that almost 40% do not own a refrigerator. These demonstrate a relatively large percentage of citizens who would be classified as having a low SES, which highlights the importance of examining this variable in the South African context. This importance is compounded by the plethora of research which has linked SES to sexual risk behaviour, demonstrating its primacy as a focal contributing factor.

SES AND SEXUAL RISK BEHAVIOURS

Many studies have attempted to link SES to sexual risk behaviour (Bradley & Corwyn, 2002; Dallabetta et al., 1993; Nii-Amoo Dodoo, 2007; Ramirez-Valles, 1998; Seeley et al., 1994; Upchurch et al., 1999). Indeed, the relationship between low SES and high levels of risk behaviour is commonly thought to be well established (Wojcicki, 2005). However, explorations of the literature as well as several recent reviews have demonstrated otherwise. Despite the existence of much research linking SES to sexual risk behaviour, this link is ambiguous (Wojcicki, 2005): while several studies show the expected relationship of low SES and high risk behaviour (Crosby, 2006; Eaton et al., 2003; Kotchick et al., 2001; Ramirez-Valles et al., 1998; Wellings et al., 2001), equally many show a relationship between high SES and high levels of sexual risk (Kabiru & Orpinas, 2008; Nyamboli, 2009; Upchurch et al., 1999; Wojcicki, 2005) and considerably more studies have shown no relationship whatsoever (Booyesen & Summerton, 2002; Wojcicki, 2005). In addition, a review by Wojcicki (2005) determined that, out of 36 studies on SES and HIV risk behaviours in sub-Saharan Africa, only 22% of the studies showed the expected negative correlation. The majority of the studies (33%) showed no relationship at all (Wojcicki, 2005). Further, studies carried out within South Africa show differences in their findings. Booyesen & Summerton (2002) and Nyamboli (2009), for example, found no relationship between SES and sexual risk behaviours, while Wang (2009) and Crosby (2006) found the expected inverse correlation. These inconsistencies speak to the above confusion surrounding the nature of the relationship between these two variables and highlight the importance of re-examining this variable.

The studies that do provide evidence to substantiate the expected relationship of low SES to high levels of sexual risk behaviour discuss several understandings of this relationship. Low parental and child education levels, linked to low SES, have been used to explain the common lack of awareness surrounding risks for HIV and STD infection in these contexts (Bradley & Corwyn, 2002; Patrick et al., 2010; Tladi, 2006). This low awareness is thought to contribute to higher risk behaviours (Booyesen & Summerton, 2002; Eaton et al., 2003). However, increasing awareness and prevention interventions based on this tenet have been launched without great success (Baptiste et al., 2006; Booyesen & Summerton, 2002; Tladi, 2006; Wojcicki, 2005). This may be partly due to the fact that those in low income areas may not have access to resources such as condoms and STI treatment, even if they are provided with awareness that these are protective (Santelli et al., 2000). Another explanation suggested by literature is the absence of alternative recreational activities; after school care and activities are limited in low SES areas and adolescents may find themselves unoccupied for hours

which may encourage them to engage in risk-taking behaviours (Nii-Amoo Dodoo et al., 2007; Patrick et al., 2010; Roche et al., 2005). This research has led to the establishment of community centres in low income areas in an attempt to address this concern. In addition, the generally small, overcrowded housing situation experienced by many in low SES areas, in which there may be children sharing rooms with their parents, contributes to a potential lack of sexual privacy (Pretorius, Ferreira & Edwards, 1999; Nii-Amoo Dodoo et al., 2007). This is said to be related to sexual risk behaviour as it allows children to view adult sexual behaviour and perhaps stirs curiosity and a desire to emulate such behaviour in an attempt to 'behave like an adult' (Nii-Amoo Dodoo et al., 2007). Finally, an explanation to consider that is possibly most pertinent to a South African context is that of unemployment and poverty; these two factors result in financial stress and often, families and individuals lack basic necessities such as food, shelter and clothing (Tladi, 2006; Wojcicki, 2005). As a consequence, some adolescents feel obligated to engage in behaviours that would not be considered under different economic circumstances (Tladi, 2006). Such behaviours include what is termed 'survival' or 'transactional' intercourse in order to generate income for much-needed goods (Eaton et al., 2003; Nii-Amoo Dodoo, 2007; Patrick et al., 2010; Seeley et al., 1994; Tladi, 2006; Wojcicki, 2005). 'Survival sex' would be considered prostitution in a different context, and is a highly risky sexual behaviour that needs to be understood and addressed in the context in which it occurs (Meyers, Javanbakht, Martinez & Obediah, 2003; Tladi, 2006).

The literature that presents the opposing relationship, that of high SES associated with high levels of sexual risk behaviour, suggests that this relationship may hold true particularly for males while the previously discussed opposite relationship is applicable to females (Upchurch et al., 1999; Wojcicki, 2005). Greater wealth has been shown to be linked to a greater number of sexual partners for males (Msisha, Kapiga, Earls & Subramanian, 2008; Nyamboli, 2009) as well as better and more frequent treatment for STIs, which suggests that these individuals may potentially engage in more risk-taking behaviour as a result of the income that they have to facilitate it (Dallabetta et al., 1993). This may be as increased access to disposable income increases the likelihood of multiple partners, in the form of both commercial sex workers as well as allowing males greater access to resources with which to attract partners (Dallabetta et al., 1993; Wojcicki, 2005). Indeed, one African nickname for AIDS, which is often contracted as a result of high sexual risk behaviours, is the Acquired *Income* Deficiency Syndrome, reflecting such a relationship (Wojcicki, 2005).

The studies that demonstrate an absence of relationship between SES and sexual risk behaviour provide little explanation for this, apart from the suggestion that perhaps it is other factors that play

contributing roles in such behaviours (Baumer & South, 2001; Santelli et al., 2000). An important comment to note in this vein is that of Tladi (2006), who suggests that “sexual behaviour does not occur in a void but is influenced by external factors in the social, political, economic and technological environment...” (p.372). This statement highlights the importance of examining these factors in explaining sexual risk behaviour. The primacy of parenting influence on adolescent development, as supported by research, suggests parent process aspects as a key social factor (Ramirez-Valles et al., 1998).

PARENTING STYLE

Parenting style can be defined as “a constellation of attitudes toward the child that are communicated to the child and create an emotional climate in which the parent’s behaviours are expressed” (Darling & Steinberg, 1993, p493). Research surrounding this construct and its influence on a variety of child and adolescent outcomes has grown since its emergence in 1930s North America and Europe. A multitude of theories have abounded (cf. Baldwin, 1948, 1955, 1967; Schaefer & Bell, 1958; Schaefer, 1965; Sears, Maccoby & Levin, 1957; Sears, 1957; Symonds, 1939). These were originally based within two spheres: the parent- child emotional relationship, and parenting practices and behaviours (Darling & Steinberg, 1993). The psychodynamic model focused on the parent-child emotional relationship, and reasoned that parent attitudes affected behaviour which in turn affected the parent-child relationship. The focus was on parenting styles as a group of aggregated conceptual practices which could affect emotional processes (Baldwin, 1948; Darling & Steinberg, 1993; Schaefer & Bell, 1958; Schaefer, 1965; Symonds, 1939). These groups of practices included autonomy granting, strictness and expression of affection (Darling & Steinberg, 1993). The focus of the learning, behaviourist model was on parenting behaviour and practices. That is, the manner in which parents had an influence on their children was examined through parenting behaviours such as rule use and enforcement, use of physical punishment and tolerance of aggression (Darling & Steinberg, 1993; Sears et al., 1957). It was seen in later studies, however, that both the emotional and the behavioural aspects were equally important in determining child outcomes, and that no one model was a sufficient explanation (Darling & Steinberg, 1993; Sears, 1957). Furthermore, the importance of examining parental beliefs became evident (Darling & Steinberg, 1993).

The absence of a model incorporating all three aspects as outlined above persisted and it was not until the appearance of Baumrind's parenting style model (1966) that the gap was filled. This model has since dramatically changed the focus of parent-related research (Darling & Steinberg, 1993). Baumrind's theory did not attempt to explore multiple dimensions, but used a configurational approach, reasoning that the influence of each parenting dimension within the family unit is dependent on the organization of the other aspects, and thus one cannot look at them in isolation. Instead, Baumrind explored the construct of parental control or conflict management, and how it may be operationalised differently by different parents (Baumrind, 1966; Darling & Steinberg, 1993). She found empirical evidence to support this approach, as parents who differ along control, also differ along other related dimensions such as warmth, involvement and maturity demands (Baumrind, 1968). Further, she defined seven qualitatively different styles - which she later refined to three (authoritative, authoritarian and permissive) - in opposition to the original hierarchical typologies (Baumrind, 1968, 1971, 1989a, 1989b, 1991a, 1991b; Glasgow, Dornbusch, Troyer, Steinberg & Ritter, 1997; Steinberg, Lamborn, Dornbusch & Darling, 1992; Steinberg, Lamborn, Darling, Mounts & Dornbusch, 1994; Weiss & Schwarz, 1996).

The "permissive parent attempts to behave in a nonpunitive...manner. She makes few demands for household responsibility or orderly behavior. She presents herself...as a resource...not as an ideal for him to emulate, nor as an active agent responsible for shaping or altering his ongoing or future behavior." (Baumrind, 1966, p889).

The "authoritarian parent attempts to shape, control and evaluate the behaviour and attitudes of the child in accordance with a set standard of conduct. She values obedience as a virtue and favors punitive, forceful measures to curb self-will...She believes in...restricting his autonomy. "(Baumrind, 1966, p890)

The "authoritative parent attempts to direct the child's activities in a rational, issue-oriented manner. She encourages verbal give and take, shares with the child the reasoning behind her policy, and solicits his objections when he refuses to conform. ...she exerts firm control at points of parent-child divergence but does not hem the child in with restrictions. ...The authoritative parent affirms the child's present qualities but also sets standards for future conduct." (Baumrind, 1966, p891).

Many early theorists defined these parenting practices and styles according to different dimensions that nevertheless had an underlying continuity of thought: Symonds dimensions (1939) of acceptance/rejection and dominance/submission, Baldwin's (1955) emotional warmth/ hostility and detachment/involvement, Schaefer's (1965) love/hostility and autonomy/control and Sears et al.'s dimensions (1957) of warmth and permissiveness/strictness. In an attempt to reconcile this previous literature on dimensions with Baumrind's typology theory, Maccoby & Martin (1983) revised Baumrind's theory to a small degree. The underlying dimensions suggested by Maccoby & Martin (1983) were responsiveness and demandingness, where demandingness referred to "the parent's willingness to act as a socialising agent" (Darling & Steinberg, 1993, p492) and responsiveness to "the parent's recognition of the child's individuality" (Darling & Steinberg, 1993, p492). Baumrind's theory was further revised by dividing the permissiveness category into two separate styles, namely indulgent and neglectful. These revisions resulted in an approximation to Baumrind's original styles (Darling & Steinberg, 1993; Glasgow et al., 1997; Georgiou, 2008; Fite, Stoppelbein & Greening, 2009; Miller et al., 1999; Smetana, 1995; Steinberg et al., 1992; Steinberg et al., 1994; Suldo & Heubner, 2004).

Authoritative parents were conceptualised as being high on both constructs, and being parents who monitor behaviour, enforce rules non-punitively, who are warm and supportive and encourage bi-directional communication (Glasgow et al., 1997; Steinberg et al., 1994). Neglectful parents were low on both constructs and seen as parents who are self-preoccupied, disengaged and do not monitor behaviour or support their children (Glasgow et al., 1997; Steinberg et al., 1994). Authoritarian parents were defined as high on demandingness and low on responsiveness and as parents who try to mould and control behaviour and emphasize obedience and respect (Glasgow et al., 1997; Steinberg et al., 1994). Indulgent parents were classified as high on responsiveness and low on demandingness, and as parents who are tolerant, warm and accepting but have little authority and make few demands for maturity (Glasgow et al., 1997; Steinberg et al., 1994). The above theory has since become cemented in the parent-related field of research, with the majority of studies conducted within this theoretical base.

It is essential to note that, while an abundance of research has used Baumrind's typological theory as its base, there are studies that emphasize the importance of returning to dimensional aspects of parenting in order to explain found relationships (Darling & Steinberg, 1993; Glasgow et al., 1997). This study chose to use both a categorical and a dimensional approach in terms of assessing the parenting style responses for several reasons. First, the structure of the instrument used and its

accompanying theoretical base lends itself to interpretation in a categorical and/or dimensional manner. Second, the abundance of empirical research to support Baumrind's typologies combined with a paucity of any parent-related research in South Africa leads to the inevitable desire to test the categorical and dimensional aspects of Baumrind's theory in a South African context. Third, practices are seen as context or domain specific, while styles provide a more global assessment of parenting which can be applied to a variety of situations (Darling & Steinberg, 1993; Smetana, 1995). This means that the researcher can glean a comprehensive view of the parenting style effects. Finally, few if any alternate theories have provided the coherent and empirically supported theoretical base of Baumrind's approach.

PARENTING STYLE AND SEXUAL RISK BEHAVIOUR

The parenting influences on sexual risk behaviour still require clarity. Despite a multitude of recent research on the topic, the only clear point is that parents *do* influence the sexual behaviour of their adolescents; the mechanisms of this influence remain clouded (Baumer & South, 2001; Bradley & Corwyn, 2002; Henrich et al., 2005; Santelli et al., 2000; Taris & Semin, 1998). Notwithstanding the seminal work of Diana Baumrind (1966, 1968, 1971, 1989a, 1989b, 1991a, 1991b), parenting studies on adolescent risk behaviour have focused variously on parental trust, control/monitoring/supervision and/or parental communication with their adolescent(s) (Boyce Rodgers, 1999; Crosby, DiClemente, Wingood, Lang & Harrington, 2003; DeVore & Ginsburg, 2005; Eaton et al., 2003; Henrich et al., 2005; Kotchick et al., 2001; Metzler, Noell, Biglan, Ary & Smolkowski, 1994; Miller et al., 1999; Newman et al., 2008; Wight et al., 2005). In White, middle class adolescents the general trend shows that increased communication, trust and supervision are all associated with a decreased level of risk-taking behaviours (Crosby et al., 2003; DeVore & Ginsburg, 2005; Eaton et al., 2003; Henrich et al., 2005; Kotchick et al., 2001; Metzler et al., 1994; Miller et al., 1999; Newman et al., 2008; Wight et al., 2005). However, these relationships vary by gender of the adolescent, gender of the parent, race, family structure and a host of additional factors. This suggests the complexity of the associations. For example, Roche et al. (2005) demonstrated that, in upper middle class African-American adolescents, increased parental control in fact led to increased risk-taking behaviours; additionally, Borawski, Ievers-Landis, Lovegreen and Trapl (2003) and Boyce Rodgers (1999) have shown that the established positive relationship of parent-adolescent control, trust and risk behaviour holds only for females, and only in the case of *paternal*-adolescent control. Further, no one study has examined all of the above-mentioned dimensions concurrently (Metzler et al., 1994;

Borawski et al., 2003). This is important as, as discussed, parenting dimensions depend on one another, are interrelated and should not be considered independently (Darling & Steinberg, 1993).

Indeed, the only findings that can be said to be somewhat consistent across gender, family structure and other variables are those that involve parenting *style* and sexual risk behaviour. Within these studies, conducted mainly in North America and Europe, results have been remarkably consistent. Children and adolescents whose parents fall within the authoritative parenting style have been found to have the most positive outcomes across a range of constructs including life satisfaction (Suldo & Heubner, 2004), self esteem (Bronstein et al., 1996; Georgiou, 2008), academic achievement (Bronstein et al., 1996; Glasgow et al., 1997; Smetana, 1995; Steinberg et al., 1992; Steinberg et al., 1994; Weiss & Schwarz, 1996), levels of internal distress and problem behaviours (Bronstein et al., 1996; DeVore & Ginsburg, 2005; Weiss & Schwarz, 1996), psychological functioning (Georgiou, 2008; Weiss & Schwarz, 1996), competence (Bronstein et al., 1996; Smetana, 1995; Steinberg et al., 1992; Steinberg et al., 1994; Weiss & Schwarz, 1996), delinquency (Georgiou, 2008), substance abuse (DeVore & Ginsburg, 2005; Dorius, Bahr, Hoffmann & Lovelady Harmon, 2004; Newman et al., 2008; Weiss & Schwarz, 1996) and sexual risk-taking behaviours (DeVore & Ginsburg, 2005; Newman et al., 2008; Weiss & Schwarz, 1996). Contrastingly, children of neglectful parents have been found to have the worst outcomes and prognosis, with children of indulgent or authoritarian parents having mixed outcomes that are nevertheless significantly worse than the children of authoritative parents (cf. Dorius et al., Georgiou, 2008; Glasgow et al., 1997; Smetana, 1995; Steinberg et al., 1992; Steinberg et al., 1994; Suldo & Heubner, 2004; Weiss & Schwarz, 1996). A clear trend has thus emerged. However, the majority of these studies were conducted using White middle class samples (Baumrind, 1966; DeVore & Ginsburg, 2005; Georgiou, 2008; Steinberg et al., 1992; Steinberg et al., 1994). As a result, the applicability of the results across more diverse groups has been questioned. In response, growing research emerged attempting to compare African-American, Asian-American and Hispanic/Latino populations (Fite et al., 2009; Julian et al., 1994). The results have been mixed and have created a controversy that remains unresolved to date.

An important note to make is that of the relevance of parenting style in the South African context. As a consequence of increasing rural-urban migration, an escalating percentage of AIDS-related deaths, violent crime and the common cultural practice of grandparents looking after their grandchildren as opposed to parents, there is a proliferation of households headed by siblings, or

extended family such as grandparents or aunts/uncles in South Africa (Amoateng et al., 2004). This is a somewhat different situation to North America or Europe, the home of many parenting studies, in which parent- or adult-headed homes are more common. This is notable in light of the considerable North American research that shows that adolescents living in single-parent homes are at much higher risk for sexual risk behaviours (Kotchick et al., 2001; Langille et al., 2003; Ramirez-Valles et al., 1998; Santelli et al., 2000; Thurman et al., 2006; Upchurch et al., 1999; Wight et al., 2005). There is little to no research that this researcher could find on the effect of complete parental absence or on the effect of non-parental caregivers on adolescent outcomes.

This, combined with the paucity of parenting research in our context, leads to speculation surrounding the way in which parenting practices may influence child and adolescent outcomes. This highlights the need for parenting style related research in order to determine if international findings are replicated and indeed, if parenting style is an important factor at all in this context.

THE RELATIONSHIP BETWEEN SEXUAL RISK BEHAVIOUR, SES AND PARENTING STYLE

The complexity of both SES and parenting practices' influence on adolescent sexual risk behaviour has been demonstrated. Inconsistent and unclear findings have suggested the need to re-examine these relationships, and it is important to consider the possibility of mechanistic influences on the explored relationships (Baumer & South, 2001; Bradley & Corwyn, 2002; Kotchick & Forehand, 2002; Roche et al., 2005; Santelli et al., 2000). That is, while it has been shown that many individual factors such as SES and parenting styles affect sexual risk behaviour, very little research has been undertaken to determine whether these individual factors may interact (Baumer & South, 2001; Bradley & Corwyn, 2002; Roche et al., 2005). This would be useful given the multisystemic nature of sexual risk behaviour (Baumer & South, 2001).

The limited body of research that has looked at possible interactions has attempted to link parenting practices to both peer influence and SES but the interrelated nature of these variables has made conclusions difficult (Kotchick & Forehand, 2002). There are arguments for several different interaction types but no conclusive results. When considering the interaction of parenting styles and SES in their impact on sexual risk behaviour, there are three immediate potential connections (Kotchick & Forehand, 2002). These three connections include both moderation and mediation

possibilities: there is the suggestion of a main association or link between parenting and sexual risk behaviour that may be moderated by SES (Bradley & Corwyn 2002; Kotchick & Forehand, 2002; Roche et al., 2005). Equally, there is the suggestion that there is a primary relationship between SES and sexual risk behaviour which may be moderated by parenting style (Kotchick & Forehand, 2002; Roche et al., 2005). Finally, there may be a relationship between SES and sexual risk that only exists through the mediator of parenting style; that is, that SES affects parenting style, which in turn affects sexual risk behaviour (Baumer & South, 2001; Bradley & Corwyn, 2002; Kotchick & Forehand, 2002; Roche et al., 2005). These possibilities will be explored briefly below.

To begin, it is important to note the interrelatedness of these possibilities; that is, the possibility of SES moderating parenting style relationship, and the possibilities that parenting style may mediate or moderate the SES – sexual risk behaviour link may present similarly in discussion but ultimately differ in the primary relationship, i.e. in the ‘main’ factor affecting sexual risk. As a result, these three possibilities will be discussed concurrently, as the factors explaining each interaction are similar.

Parenting style is undoubtedly influenced by cultural values, education levels and economic factors (Henrich et al., 2005; Heubner & Howell, 2003; Kotchick & Forehand, 2002). The psychosocial impact of poverty, unemployment and financial strain often result in disruptions to parenting (Kotchick & Forehand, 2002; Roche et al., 2005). Kotchick & Forehand (2002) report that low-income mothers show decreased warmth, affection, communication and supervision, and increased strictness and physical discipline in relation to their higher-income counterparts. In addition, there are fewer resources in low SES areas to enable parents to cope with any existing problem behaviour or stress associated with parenting, which may decrease their capability to provide supportive and nurturing parenting (Baumer & South, 2001; Julian et al., 1994; Kotchick & Forehand, 2002). It is important to note here that this speaks to the circular relationship between parenting and adolescent behaviour, in which parents may utilise a particular style in response to problem behaviour (reactive responding) as opposed to adolescents reacting to an initial style (Bradley & Corwyn, 2002). Parents in higher income families have fewer financial stressors, greater access to resources and so are less affected by economic concerns (Bradley & Corwyn 2002; Kotchick & Forehand, 2002; Roche et al., 2005).

Adolescents may be deterred in higher income areas by the prospects of future further education and employment opportunities; that is, higher studies and gainful employment are prioritised as they are highly achievable in these contexts, and so deter adolescents from engaging in activities that may have consequences, such as unplanned pregnancy, which limit these opportunities, at least in the short term (Kotchick & Forehand, 2002; Roche et al., 2005). Conversely, low SES is often related to circumscribed (limited) social and educational opportunities (Santelli et al., 2000). This means that adolescents growing up in these areas may frequently be exposed to adults with few job prospects and little chance of furthering their own education (Nii-Amoo Dodoo et al., 2007; Ramirez-Valles et al., 1998). In these contexts, there may seldom be adult 'role models' who model positive behaviours to be emulated (Ramirez-Valles et al., 1998).

In addition, in low income areas, parental supervision may often be very low or absent, which is associated with higher adolescent sexual risk behaviours (Baumer & South, 2001; Kotchick & Forehand, 2002; Roche et al., 2005). This process, termed collective socialisation, views parents as agents of social change who can affect their adolescents' behaviour but who have a decreased ability to parent effectively as a result of the effects of low SES, which results in increased adolescent risk behaviour (Baumer & South, 2001). Thus parents in low income areas may struggle to cope with the multiple stressors and it may disturb their parenting skills (Bradley & Corwyn, 2002; Kotchick & Forehand, 2002). In a similar vein, 'good' effective parenting may act as a buffer, tempering the effects of SES on sexual risk behaviours (Kotchick & Forehand, 2002). Adequately affectionate and supervised parenting may be a resource for adolescents residing in low income neighbourhoods; seeing parents who have few opportunities may inspire their children to succeed and not to engage in risk taking behaviour that may hamper their future achievements (Roche et al., 2005).

The above relationships suggest, as stated, three immediate potential connections. For example, the research that shows that parents in low income areas are less warm and use increased physical discipline with their children in comparison to parents in higher income areas (Kotchick & Forehand, 2002) could imply that SES is moderating how the parents interact with their children; it could be equally be suggesting that SES affects the parenting style, which affects interactions (parenting style as a mediator), or that SES affects the child behaviours but this effect can be buffered or amplified by specific parenting practices (parenting style as a moderator).

It can be seen that the potential relationships and interactions among these variables are complex and varied. To choose to examine only one of these interactions would be to prioritise one 'main effect' or independent contributing factor over another, a decision that does not appear useful given the clear need for thorough exploration of the way in which these factors affect sexual risk behaviour. An investigation surrounding the way in which these three variables may interact, using the three possibilities as outlined above, has been deemed most beneficial by this researcher in an attempt to gain clarity on the clouded existing data. This is particularly useful as the three possible interactions above have not been previously fully explored within the South African context, if at all (Baumer & South, 2001; Bradley & Corwyn, 2002).

ADDITIONAL FACTORS

It is essential to note that the chosen factors of SES and parenting style are in no way the only factors associated with sexual risk behaviour. As previously discussed, adolescent risk taking behaviour has been linked to peer influences, family structure variables, gender, race, neighbourhood socio-economic variables, crime, cultural factors and so on (Baumer & South, 2001; Eaton et al., 2003; Kotchick et al., 2001; Langille et al., 2003; Miller et al., 1999; Patrick et al., 2010; Ramirez-Valles et al., 1998; Tladi, 2006; Upchurch et al., 1999; Wight et al., 2005). While some of these variables will be addressed superficially using the demographic section of this study, other factors are simply beyond the scope of the current study. However, it is important to create a base list of alternate factors to enable a foundation for future research in the South African context on this topic (Patrick et al., 2010). As a result, participants will be asked to list and describe factors that they feel contribute to their and their peers' sexual risk behaviours. These factors will not constitute the focus of the study in any sense but will potentially provide additionally useful further information regarding sexual risk behaviour genesis in the South African context, which may provide a springboard for future research.

The additional importance of these questions centre on the fact that factors not commonly found, discussed or emphasized in middle class Western samples may be mentioned, which would greatly aid in the formation of *context-specific* programmes to reduce sexual risk behaviour in South Africa. Two such potential factors are gender and cultural variables.

South Africa is a highly patriarchal society in which there are entrenched gender roles and inherent power dynamics (Baptiste et al., 2006; Booysen & Summerton, 2002; Seboka, 2009). These gender roles often serve to subjugate and socially subordinate women, and reduce their decision-making power, especially within a sexual context (Baptiste et al., 2006; Booysen & Summerton, 2002).

Women are seldom able to ask their partners to use a condom as this is viewed as either an implication of the woman's unfaithfulness, or an accusation that her partner is cheating (Patrick et al., 2010; Seboka, 2009). Condom use is associated with perceived infidelity and women are thus unable to negotiate this sexual decision (Seboka, 2009). Indeed, discussions surrounding condom use may result in violence perpetrated against the female as punishment for such an 'accusation' (Crosby, 2006; Tladi, 2006). Women in the South African context are also often unable to engage in sexual negotiation due to their financial dependence on their partners; women may be forced to engage in sexual risk behaviours such as unprotected sex as a result of a lack of agency surrounding decisions regarding financial issues (Tladi, 2006).

This is closely tied to cultural factors as many African cultures tend to subscribe to the patriarchal permissiveness surrounding men who have multiple sexual partners (Baptiste et al., 2006). Further, as in many cultures but particularly so in South Africa, sexual intercourse is seen as a power-generating act; that is, adolescent boys who have had sexual intercourse are more highly regarded as having 'proven [their] manhood'. Conversely, girls are expected to remain virgins until marriage and to stay faithful to their partners (Kotchick et al., 2001; Patrick et al., 2010). Adolescent girls who do not adhere to this are labelled 'sluts' or 'easy'. Boys who have multiple partners and who succeed in having sex without a condom are hailed as virile and potent and are respected (Baptiste et al., 2006). This is specifically notable for adolescents in light of the fact that adolescence is the period in which boys traditionally become men (and similarly girls become women), and in which sexual identities are formed. Further, adolescent girls are "likely to be less experienced than women in the complex process of negotiation with male sex partners" (Voisin, DiClemente, Salazar, Crosby & Yarber, 2006, p.73). These deep-rooted and extant gender roles may provide insight into the factors surrounding sexual risk behaviours in adolescents in this context, particularly when one considers that adolescents are especially vulnerable to the pressure of socio-cultural norms through peer influence.

Further, it is noteworthy that the definition of which actions constitute 'sexual risk behaviour' may differ by culture and population. A salient example is that of unplanned pregnancy; while this is considered a primary risk factor in the developed world such as in North America and much of Europe, in some contexts, the arrival of a child to a teenage mother means that she may receive state-provided social grants from the state which may provide much-needed income (Tladi, 2006). In this way, adolescent pregnancy may be considered a protective factor in many contexts, as it may result in this increased income (Tladi, 2006). Similarly, while perhaps less commonly, being HIV-positive can be perceived as a protective factor in some communities; Tladi (2006) reports the practice of either ceasing to take one's antiretroviral medication, or indeed purposely contracting HIV in order to remain or become eligible for a state-provided disability grant. According to Tladi (2006), "their intake of treatment poses a threat to eligibility, due to the positive effect it tends to have on the individuals' health" (p. 371). An illuminating quotation from Steinberg *et al.* (2002, as cited in Tladi, 2006) highlights the above practice: "I love this HIV, now at least with the grant I'm trying ... I get the disability grant and the child support grant ... before I was staying with my mother and father and my sister, they didn't work...the only thing that was helping was my grandmother's pension. Concerning the illness, our lives [have] changed completely..." (p. 371).

Finally, it is important to note that in a qualitative study conducted by Patrick *et al.* (2010), exploring the reasons South African adolescents had for choosing for and against engaging in sexual risk behaviour, a common and spontaneous theme that emerged was that of sexual coercion or rape. This theme consistently surfaced despite the questions specifically limited to reasons for *choosing* to engage in sexual risk behaviours (Patrick *et al.*, 2010). This suggests that much of the recorded 'risk behaviour' in adolescents in South Africa may indeed be a reflection of the violent context and not of true risk behaviour trends (Patrick *et al.*, 2010). This possibility is beyond the scope of the current study but is an important factor that the researcher will attempt to take into account through the phrasing of the risk behaviour questions.

THEORETICAL POSITIONING

The current study is difficult to conceptualise within a theory of risk behaviour. There are multiple theories currently used, the majority of which were developed within psychology (Amaro, 1995). These include models such as the health belief model and the theory of reasoned action. Many such theories consider risk behaviour as a function of risk perception (susceptibility, vulnerability), or as

related to locus of control, self efficacy, sensation seeking or self esteem (Voisin et al., 2006). They often tend to focus on individualistic tenets of intention, knowledge, attitudes and beliefs (Amaro, 1995). These appear to frequently be cognitively-based individual decision-making models that seem suggest that the decision maker is able to make decisions irrespective of external context; that “sexual behaviors and encounters are controlled totally by the individual” (Amaro, 1995, p440). This is problematic given their failure to consider a broader socio-cultural, socio-economic, or socio-political context which may influence sexual risk taking behaviours.

Alternate theories used to understand risk taking behaviour such as social learning theory, do provide some greater acknowledgement as to the influence of extra-individual factors. Social learning theory, while examining individual factors such as self efficacy and perceived efficacy, also explores the impact of modelling one’s behaviour on that which has been seen (Bandura, 1977). This idea of modelling speaks to social factors such as the media and relational factors such as modelling based on peer or parental behaviour. Other socially-focused theories focus their discussion on socially negotiated actions related to power differentials (Fisher & Fisher, 2000; Rhodes, 1997). In this way, social learning theory and its theoretical counterparts incorporate ideas surrounding the potential impact or influence of societal influences on behaviour. However, these theories remain inadequate as explanatory tools in and of themselves as they fail to account fully for situational constraints, and the way in which broader *extra-relational* factors such as economic and political influences, may impact risk taking behaviours (Amaro, 1995). Mann (1991, p13 as cited by Amaro, 1995, p438-439) summarises the above:

“The individualistic bias of current models of behaviour gives rise to difficulties in conceptualising and studying the relationship between extra-individual factors (economics culture, politics) and individual behaviour. Beyond token acknowledgement of the important role extra-individual factors may play in influencing personal behaviour, available research offers little of practical utility for HIV prevention programs that must address the broader context of HIV in different regions”.

As a result, the current study will attempt to merge two theories of risk behaviour in order to explain the way in which parenting style and SES may affect sexual risk behaviour. These two models are the Theory of Reasoned Action (TRA), and the theory of situated rationality. The merger of these two models is an attempt to merge both the individualistic and the extra-individual/extra-relational factors that may impact sexual risk taking behaviours. It is important to note that this merger

remains to some extent inadequate as a complete explanatory mechanism, as these theories assume rational, individual decision-making, *influenced by context*; while that could include situations such as transactional sex, as this is a individual decision influenced by context, they do not consider scenarios which speak to individuals engaging in sexual risk behaviour without choosing to do so. However, as the current study conceptualises sexual risk taking behaviour as voluntary and excludes situations such as forced sexual intercourse/rape, the model is considered a helpful tool in understanding sexual risk behaviour for this study. Each model will be briefly explained below and integration will be considered. The way in which the merged model may apply to the current study will end the discussion.

TRA suggests that behaviour is a function of intention. These behavioural intentions are influenced by one's attitude toward an act and one's subjective perception of support from others for the act (Albarracín, Johnson, Fishbein, & Muellerleile, 2001; Fisher, Fisher & Rye, 1995; Fisher & Fisher, 2000; Sheppard, Hartwick & Warshaw, 1988). One's attitude, in turn, is a function of one's belief of the consequences of the act and the evaluations of these consequences; one's subjective perception of support is influenced by whether the supportive others want the individual to perform the act and the motivation one has to comply with these others' wishes (Albarracín et al., 2001; Fisher et al., 1995; Fisher & Fisher, 2000; Sheppard et al., 1988). This model seems to incorporate, as does social learning theory, both individual and relational/social influences on risk taking behaviours.

The theory of situated rationality draws on similar cognitive and behavioural theories as TRA and proposes that individuals make rational decisions about sexual risk behaviour based on decisions about consequences and the like (Moore & Oppong, 2007; Parsons & Atkinson, 1992; Rhodes, 1997). However, situated rationality theories suggest that exogenous social factors such as familial influence cannot be neglected: that is, humans do not make rational decisions in a vacuum free of social, political or economic context (Moore & Oppong, 2007; Parsons & Atkinson, 1992; Rhodes, 1997). It is suggested that risk can be best explained through the interplay of individual and contextual factors; that individuals exist and make decisions in a broader world, and are influenced by contextual factors (Moore & Oppong, 2007; Rhodes, 1997). Understanding risk now involves the individual's broader social, political and economic world, relationships and situations. Thus situated rationality theories propose that humans make rational decisions about risk that are "*socially*

situated" (Rhodes, 1997, p213). That is, risk is relative to one's situation and is dependent on and changes according to external factors (such as SES, for example).

In an attempt to integrate these theories, the suggestion is that, while individuals may make rational and reasoned choices about sexual risk behaviours, weighing the consequences of such behaviour as well as support for or against the behaviour from referent others, there is also the fact that additional external factors have an impact on this decision-making. These additional factors result in individuals making different reasoned decisions in different situations (physical, familial and social). This may be because different situations may have an effect on the way in which referent others may react, the level of support that may be given for specific behaviours or on the consequences of a particular behaviour. As a result, the same behavioural choices occurring in two different contexts may result in different decisions made by the same person based on the external factors that affect the individual's attitude and perception of support.

Applying this to the current study then suggests that one may develop an attitude and a subjective perception of support for HIV-related sexual risk behaviour from one's family (referent others) and that, in this way, sexual risk behaviour is either promoted/allowed or disallowed/disencouraged. These attitudes and subjective perceptions, as influenced by levels of support, parental involvement (desires of supportive others) and strictness (consequence existence and severity of sexual risk behaviour), then guide one's decision making concerning whether or not to engage in a sexually risky behaviour. Furthermore, these behavioural consequences and perceived levels of support may be influenced by external factors, such as SES levels.

One might hypothesise that, in a lower SES area, with potentially associated lower levels of acceptance and/or involvement from parents, it may be considered less risky to engage in sexual intercourse without a condom as there are *relatively higher* risks with which these adolescents are preoccupied, such as isolation, poverty and crime. Further, these behaviours may then have fewer consequences, owing to the lower supervision and involvement from parents. Conversely, in high SES areas or in families in which the parents are accepting, involved and have an adequate level of supervision, engaging in sexual risk behaviour may be less common as the adolescents face more severe consequences, would receive less 'support' for their risky actions and may perceive these risk

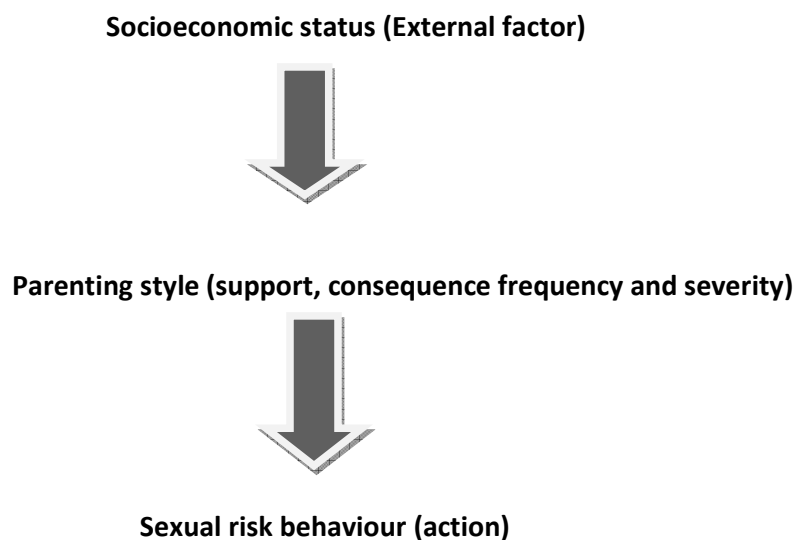
behaviour as *relatively highly* risky in comparison to other behaviours that they may engage in or difficulties that they may face.

Thus the relationships to be examined in the study can be conceptualised here. The idea that parenting style may act as a mediator between SES and risk behaviour can be explained by the way in which SES (the external situational factor) has an effect on parenting style (support, consequences and severity of consequences) which in turn has an effect on an individual's risk behaviour. Similarly, parenting style affects decisions made about risk behaviour (support, consequences and severity of consequences) and this can be moderated (or changed) by the SES level as a situational factor, as the parenting style effects may have differing levels of impact dependent on the SES situation. Finally, the way in which SES is thought to affect risk behaviour, with parenting style as a moderator can be understood as a decision made about risk behaviour based on an SES situation, with the effects of parenting style (particularly support for the behaviour, consequences of the behaviour and the severity of the behavioural consequences) influencing the particular situational factors. The diagram below gives a pictorial indication of the above models.

Figure 1

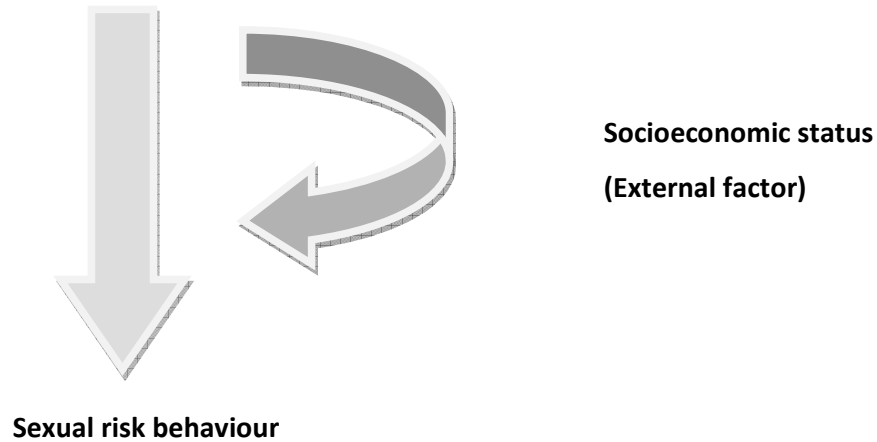
Three models to explain the relationship between parenting styles, SES and sexual risk behaviour

a) Model one: mediation

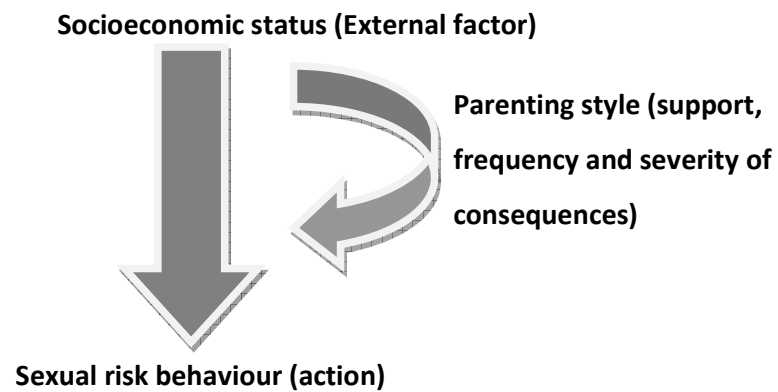


b) Model two: moderation

Parenting style (support, consequence frequency and severity)



c) Model three: moderation



CONCLUSION

In summation, adolescent sexual risk behaviour is an increasingly explored area of interest that has been mainly researched using White, middle class samples and focused on individual contributing/explanatory factors. Inconsistent findings have abounded and little clarity has been gained into the complex relationships inherent in this construct. In an attempt to draw together two

separate bodies of literature, namely SES and parenting factor studies on sexual risk behaviour, this study aims to examine the possible interactions of these two variables as mediators or moderators in a heterogeneous climate that includes economic, ethnic, and cultural diversity. Further, the study aims to identify additional factors that may contribute to adolescent sexual risk behaviour with the ultimate objective of providing both theoretical additions to the field and information that may help to develop relevant, effective and sustainable sexual risk behaviour intervention programmes.

THE CURRENT STUDY

The current study attempted to explore the constructs of parenting style, SES and HIV-related sexual risk taking behaviour in Grade 10 and 11 high school students. The aim of the study was to determine whether a relationship exists between these constructs and, if so, the nature of that relationship and the possible mechanisms that may underlie associations between these constructs.

The purpose of this study was to provide information as to the factors that may be related to high HIV-related sexual risk taking behaviours, with the aim of using this knowledge to aid in the development of real-world HIV-related interventions in the form of skills courses for parents, or community interventions in certain SES areas. The study further aimed to add to the growing body of research in the field of parenting style effects, particularly to the research surrounding the applicability of Baumrind's typologies to more diverse contexts.

RESEARCH QUESTIONS

Primary research questions:

- a) Is there a relationship between parenting styles and sexual risk behaviour in South African adolescents?
- b) Is there a relationship between SES and sexual risk behaviour in South African adolescents?

Secondary research questions:

- a) Does SES moderate the relationship between parenting styles and sexual risk behaviour?

- b) Does parenting style moderate the relationship between SES and sexual risk behaviour?
- c) Does the age of the caregiver/parent affect either of the above relationships?
- d) Does parenting style act as a mediator between SES and sexual risk behaviour?
- e) Does the identity of the parental figure affect the variables of parenting style and sexual risk behaviour?
- f) Are there significant differences in sexual risk behaviour present across the demographic groups of gender, family structure, parental education level and population group?
- g) Are the factors of age of sexual debut and number of sexual partners related to sexual risk-taking?
- h) What do adolescents identify as motivations for and against participating in sexually risky behaviours?

CHAPTER THREE: METHODOLOGY

SAMPLE

The sample consisted of 366 high school learners from five schools in Northern Johannesburg. These students were obtained from Grades ten to matric and ranged in age between 15 - 20 years, with a mean age of 16.4. The bulk of the sample was aged either 16 (47.27%, $n=173$) or 17 (21.58%, $n=79$). The sample was made up solely of volunteers, and thus was obtained using a non-probability convenience sampling strategy (Babbie & Mouton, 2001).

Table 1

Sample demographics

Variable	Sample size	Percent	Variable	Sample size	Percent
Gender			School SES		
Female	208	56.83	Low	51	13.93
Male	158	43.17	Medium	118	32.24
			High	197	53.83
Population group			Primary caregiver		
White	103	28.14	Mother/Father	267	85.03
Black	220	60.11	Aunt/Uncle	17	5.41
Indian	23	6.28	Grandparents	16	5.10
Coloured	15	4	Sibling	7	2.23
Asian	4	1.09	Childheaded	0	0
Other (biracial)	1	0.27	Guardian	7	2.23
Individual SES/parental education level			Family structure		
Low	155	60.08	Two natural parents	152	41.64
High	103	39.92	Single parent	119	32.60
			Step parent	40	13.70
			Other	44	12.05

The sample was 56.83% female ($n=208$) and 43.17% male ($n=215$). The population group breakdown demonstrated a majority of Black and White participants (60.11% and 28.14% respectively). The remaining population groups were less represented with 6.28% Indian participants, 4.0% Coloured participants, 1.09% Asian participants and 0.27% participants who classified themselves as 'other'. The sample had a lower incidence of low and medium neighbourhood socio-economic status (SES) at 13.93% and 32.24% respectively, than high SES at 53.83%; however, there was a higher reported

incidence of low individual family SES at 60.08% than of high (39.93%). The majority of the participants reported to have come from a family unit with two natural parents (41.64%, $n=152$), followed closely by a unit characterised by single parent status (32.60%, $n=119$). In addition, the majority of the sample reported having a mother or father as their primary caregiver (85.03%, $n=267$), in comparison to those who were looked after by aunt/uncle (5.41%) and grandparents (5.10%), siblings or guardians (both 2.23%).

INSTRUMENTS

The study made use of three instruments: a self-developed biographical questionnaire, an adapted adolescent sexual risk behaviour questionnaire, and an adapted version of the Parenting Style Index (PSI).

BIOGRAPHICAL QUESTIONNAIRE [SEE APPENDIX C]

The questionnaire began with a requirement for demographic information, namely age (as open-ended), gender, population group (specified as White, Black, Indian, Coloured, Asian or Other), the identity of the primary parent/caregiver (as open-ended), the age of the primary parent/caregiver (as open-ended), the participant's type of family unit [(specified as living with two biological parents, living with one parent, living with one parent and one step-parent, or living in another situation, with a request to specify what this alternate situation is (Glasgow et al., 1997; Steinberg et al., 1992; Steinberg et al., 1994; Upchurch et al., 1999)] and socio-economic status (SES). Neighbourhood SES was examined using the school type as an approximation; as the quintile system is based on national census data from the school catchment area, based on income, unemployment rate and literacy levels among other factors, the quintiles provide a good estimation of the SES in the surrounds (Chamane, 2008; Education and Training Unit, n.d.; Kanjee & Chudgar, 2009). Individual family SES is a consistently difficult variable to measure and as a result, the demographic section required participants to complete an additional question regarding this variable. While both income and education are the most common and traditional measures/indicators of SES (Fernald, 2007), it is often difficult to obtain accurate estimations of annual income (Zere & McIntyre, 2003). Thus SES was defined as parental education level – students needed to indicate the highest level of education completed by each parent with options as (a) not a high school graduate (b) a high school graduate

(c) technical/business/trade school (d) some university (e) bachelor degree (f) postgraduate degree (g) unsure (Georgiou, 2008; Glasgow et al., 1997; Miller et al., 1999; Steinberg et al., 1994). This definition of SES can then be measured as an interval variable (the score of each parent or the combined parental education level) or as a nominal variable, where the data can be separated into lower and upper education levels, with the lower half (not a high school graduate – technical...school) is scored as low SES and the upper half (some university – postgraduate degree) as high SES. However, as is discussed in further sections, this item was not well answered by participants ($n=200$ out of a total $n=366$) and, as such, the school SES measure was used in all analysis. The correlation between neighbourhood/school SES and parental education level was significant, moderate and positive ($r=.37$, $p<.0001$), which suggests that these constructs change in the same direction and may be used as approximations of one another.

These particular demographic variables were important to examine as previous literature has found conflicting results: both parenting styles and sexual risk behaviour practices have been shown to be linked to participant's gender, race, family type and parental education level (particularly maternal education level), while it has been equally found that the literature results hold across these demographic subtypes (Glasgow et al., 1997; Miller et al., 1999; Santelli et al., 2000; Thurman et al., 2006; Upchurch et al., 1999; Weiss & Schwarz, 1996). Further, the importance of examining extrafamilial factors such as neighbourhood SES has been demonstrated in literature (Baumer & South, 2001).

PARENTING STYLE INDEX (PSI) [SEE APPENDIX D]

There are many different forms of self-report questionnaires to assess parenting types, practices or dimensions (for a comprehensive review see Skinner, Johnson & Snyder, 2005). Each of these questionnaires differs slightly in its approach to the theoretical base. The Parenting Style Index (PSI) (Lamborn, Mounts, Steinberg & Dornbusch, 1991; Steinberg et al., 1994) is a measurement that encapsulates the original typologies of Baumrind (Baumrind, 1968, 1971, 1989a, 1989b, 1991a, 1991b; Weiss & Schwarz, 1996) and their revision by Maccoby & Martin (1983). The PSI has three scales, two of which were used in this study - the acceptance/involvement scale (which measures responsiveness) and the strictness/supervision scale (which measures demandingness) (Glasgow et al., 1997; Miller et al., 1999; Steinberg et al., 1992; Steinberg et al., 1994; Suldo & Heubner, 2004). The PSI has a third scale labelled 'psychological autonomy granting' which emerged during factor

analysis of previously selected parenting dimensions (Schaefer, 1965; Steinberg, 1990; Steinberg et al., 1994). This construct is regarded as important for defining authoritativeness but not in differentiating among categories, and for these reasons was excluded from the questionnaire (Steinberg et al., 1994).

The acceptance/involvement scale consists of 7 self report items rated on a 4-point Likert type scale from 1 (strongly disagree) to 4 (strongly agree). The strictness/supervision scale consists of 6 self report questions scored on a 4-point Likert type scale from 1 (strongly disagree) to 4 (strongly agree). A higher score on both scales indicates higher levels of acceptance and strictness respectively.

The scale may be scored on a categorical or continuous scoring basis (for examples see Steinberg et al., 1992 and Steinberg et al., 1994). The sample was trichotomised on acceptance/involvement and strictness/supervision; both scores were to be examined simultaneously. The sample was categorised according to the position of scores on the tertiles, i.e. authoritative was classified as families scoring in upper tertiles on both scales while neglectful families were those with scores in the lowest tertiles. Authoritarian families were defined as scoring in the upper tertile on strictness/supervision but the lowest on acceptance/involvement, and indulgent families were classified as those who scored in the upper tertile on acceptance/involvement and lowest for strictness/supervision. The families scoring within the middle tertiles were placed into a category labelled as 'disorganised style' (Steinberg et al., 1994). However, once this process was complete, it was found that the Disorganised style predominated, making up almost 50% of the sample. As such, the data was then halved and, following an identical method to the above, allocated Authoritarian (high supervision, low acceptance), Authoritative (high on both), Indulgent (high on acceptance and low on supervision) and Neglectful (low on both). The scores were further examined as interval scale scores where necessary for statistical analyses.

The PSI's self report nature may result in threats to internal validity. However, Glasgow *et al.* (1997), Gray & Steinberg (1999), Smetana (1995), Steinberg *et al.* (1992), Steinberg *et al.* (1994), Steinberg (1990) and Schaefer (1965) have shown that youth's perceptions of parenting behaviour and attitudes, is at least as important as parental reports or objective measures by observation.

While the alpha coefficients for each subscale ranged in this researcher's previous study from .72 to .76, and reports suggest that the reliability estimates are sound (cf. Glasgow et al., 1997; Lamborn et al., 1991; Steinberg et al., 1992, 1994; Suldo & Heubner, 2004), it must be noted that the scale items were originally written for a White, middle class, American population, and the scale's validity for alternate contexts was previously unknown. A previous study conducted by the researcher made use of the PSI with only moderate success, with multiple problems arising with the strictness/supervision scale questions. These difficulties appeared to stem from the inconsistencies between everyday situations in this context in comparison to North America. For example, one question enquired as to the extent of parental knowledge about where the adolescent was after school/at night; with the limited and unreliable public transport available, parents in South Africa often drive offspring to and from school and night-time outings. This is clearly different in the United States and, in the South African sample, resulted in strictness/supervision measures that were highly negatively skewed as few respondents had parents who did not know where they were during the day/at night.

Often, participants felt that they could not answer the questions satisfactorily and several wrote notes on the questionnaire to clarify answers. A substantial number of participants struggled to answer the questions surrounding curfew adequately as the concept may not be as established in this context as it might be in North America; that is, respondents stated that they were allowed to stay out "until [their] parents fetched [them]" or that their curfews changed weekly depending on parental obligations. These answers demonstrate that some of the questions, particularly those from the supervision/strictness scale, may be inappropriate for the South African context.

To this end, the PSI was adapted in the current study with the aim of better reflecting the context in which it was used. A factor analysis was conducted on previous data collected by the researcher in order to confirm the measurement of the demandingness and responsiveness factors. The factor analysis found four factors using Kaiser's criteria, which would explain 53.87% of the variance. The original two-factor concept only explains 37.56% of the variance cumulatively. When the factor loadings were considered, seven of nine acceptance/involvement scale items loaded on factor one, with the remaining two items loading on factor four. Similarly, six of eight supervision/strictness items loaded on factor two, with the remaining two items loading on factor three. The two items from each respective scale were the only items to load on factors three and four. This clearly suggests that, while factor one and two may represent the two distinct, separate factors of supervision/strictness (demandingness) and acceptance/involvement (responsiveness), four items in total appear to be measuring alternate constructs. These items (items number two and three from

the acceptance/involvement scale, and items number ten and eleven from the supervision/strictness scale) were required to be reworded, or removed. An examination of the acceptance/involvement scale items that loaded on a different factor leads the researcher to believe that the problematic nature of these items may lie in the overly authoritarian language used (i.e. the word ‘push’). As a result, the items were reworded as follows:

Original item (2): My parents keep **pushing** me to do my best in whatever I do.

Re-word: My parents **encourage** me to do the best I can in whatever I do.

Original item (3): My parents keep **pushing** me to think independently.

Re-word: My parents **encourage/allow** me to think independently.

The supervision/strictness items were, however, more problematic. The factor analysis showed that the items in this section were measuring two separate constructs; it is suspected, for example, that the questions surrounding parental attempts at knowledge surrounding their children’s whereabouts, and their actual knowledge, may be measuring something about the children (i.e. stealth, ability to deceive etc.) as opposed to something about the strictness of the parent or guardian. Alternatively, it may have been measuring levels of communication between parent and child, which while possibly *affected by* levels of strictness, is an entirely different construct. As such, it was important to consider rewording, removing from and/or adding items into this scale in order to render it more suitable within a South African context. Given that previous research has demonstrated the difficulty found by a South African sample in answering all of the items within this subscale section, as discussed above, the suggested solution by this researcher was to attempt to reframe the current items as far as is possible while retaining the essential nuance of the original item, as well as include several new items that may be regarded as more relevant to this context. These new items were based on contextual relevance to the South African context in terms of practicalities surrounding public transport issues and the limitations placed on adolescents’ freedom in this respect [see Appendix D; items 10 - 20].

A pilot study was run with the adapted PSI, using a sample of approximately 20 first year university students across a range of disciplines as a convenience sample. These participants were likely to be very recently out of high school, close in age and experience to the main study sample, and it was hypothesized that they may find it easier to answer the pilot questions based on their high school experience, with the aim of reducing the intensity of retrospective responding. Further, the range of

disciplines aimed to provide a sample that is as varied as possible and thus result in greater scope and variety of response. This pilot study provided data to ensure that the wording and meaning changes were acceptable to the pilot sample. One participant indicated confusion around the idea of parents trying to know where one is (item from the original PSI) and questioned in what way try was meant (i.e. do they ask you, your friends, spy on you and the like). However, she was the only participant to indicate any confusion in the questionnaire and as such, it was decided to retain the items as they were written and to ensure that the researcher was on hand to clarify this question during the study if necessary.

The fact that potential issues may have arisen through the use of a questionnaire that is newly adapted and has not been thoroughly tested was noted. As a result, both the adapted and the original items were given to participants to complete. This provided data to compare the utility of both the original and the adapted version of the scale within the South African context. Further, an additional factor analysis and scale reliability analyses have been conducted, as discussed below.

The factor analysis was conducted in order to confirm the measurement of the demandingness and responsiveness factors. Multiple analyses were run using different combinations of items (i.e. all items, excluding old items, and the like), with differing factor numbers and loadings. The factor analysis run including all of the old and all of the new items returned seven factors, which demonstrated no clear pattern and many items loading on more than one factor. This result was similar for analyses excluding the old items, the new items, the problematic old items, and the problematic items and new items respectively. A two factor model was found, through excluding all of those items that loaded on more than one factor, and those items that loaded on a factor singly (i.e. items that acted as a factor on their own). This factor analysis found two factors using Kaiser's criteria, which explains 46.82% of the variance. While this variance explained is quite low, this model showed sound reliability and validity which suggest its use. When considering the factor loadings, all of the acceptance/involvement items used loaded on factor one, with the supervision/strictness items loading on factor two.

The items that were used in the acceptance/involvement scale included seven of the nine original items, and excluded the two originally problematic items that had been reworded, that is:

Original item (2): My parents keep pushing me to do my best in whatever I do.

Re-word: My parents encourage me to do the best I can in whatever I do.

Original item (3): My parents keep pushing me to think independently.

Re-word: My parents encourage/allow me to think independently.

The items that were used on the supervision strictness scale included six of the original nineteen items. Of these six items, one item was in the original PSI, with the remaining five being a selection of those items newly added to the PSI. The items retained are the following:

- 12. When I go out at night, my parents allow me to go on my own
- 17. My parents allow me to have members of the opposite sex at my house when they're not there
- 18. My parents allow me to go to parties/friends' houses where there are no other parents there
- 19. My parents allow me to go to parties where they don't know the parents who are there
- 20. Please rate how strict you feel your parents/guardians are on the scale below
- 22. In a typical week, what is the latest you can stay out on FRIDAY OR SATURDAY night?

This cut down version was shown to be equivalent to the original PSI scale (see results section). In addition, Cronbach's alpha was conducted on the PSI to determine internal consistency reliability. The results of these analyses can be found in more detail in the results section, but it may be noted here that the Cronbach alpha for these items overall was .72, with the acceptance/involvement scale Cronbach alpha at .78 and the supervision/strictness scale at .79, all of which indicates adequate to good reliability.

ADOLESCENT SEXUAL RISK BEHAVIOUR QUESTIONNAIRE [SEE APPENDIX E]

Few sexual risk studies make use of formal risk behaviour questionnaires; the majority of these studies have simply asked between 1 and 5 questions surrounding participant's sexual practices (cf. Eaton et al., 2003; Henrich et al., 2005; Julian et al., 1994; Miller et al., 1999; Ramirez-Valles et al., 1998; Santelli et al., 2000). This may be because available formal sexual risk behaviour questionnaires are often narrowly focused, centring on practices relating to HIV testing frequency (cf. Howard, 2006; Lebodi, 1999; Mbengashe, 1996), sexual intercourse frequency and same-sex intercourse frequency (cf. Darke, Hall, Heather, Ward & Wodak, 1991; Snell, 2001). In addition, many of these questionnaires are scored on a nominal scale, which limits the data analysis method possibilities.

As a result, the current study has adapted the 'Practices regarding HIV practices' questionnaire (Howard, 2006) while taking cognisance of commonly asked questions in previous literature. The resulting Adolescent Sexual Behaviour Questionnaire consists of 5 items scored on a 7-point Likert-type scale, from 1 (never) to 7 (always). The questionnaire encapsulates common risk behaviours associated with increased STD and HIV contraction risk. There is also a question to determine whether participants are sexually active (yes/no), in order to establish a baseline level of sexual activity, as well as two open-ended questions asking participants about their age of sexual debut and number of total lifetime sexual partners up to this point.

This instrument has been scored as follows: the 5 Likert-type items constituted the 'sexual risk' assessment measure, with a higher score translated as a higher level of sexual risk-taking behaviour, and the two open-ended questions surrounding age of debut and number of sexual partners have been treated as separate interval measures, with their relationship to the risk measure to be assessed.

The Adolescent Sexual Risk Behaviour Questionnaire was piloted concurrently with the PSI, using the same sample of approximately 20 first year university students across a range of disciplines. Again, this provided information to ensure that the wording and meaning changes were acceptable to the pilot sample; confusion was indicated around how to answer the questions if one did not participate in a certain behaviour, and also around whether one should answer the questions if one was not *currently* sexually active, but had been in the past. The appropriate changes were made to the questions to clarify these issues. A factor analysis as well as scale reliability analyses have been conducted and are reported on below, as well as in the results section in greater depth.

The factor analysis was conducted in order to confirm the measurement of one factor by the given questions; namely, HIV-related sexual risk behaviour. The factor analysis found one factor using Kaiser's criteria, which would explain 59.91% of the variance. When the factor loadings were considered, all five items loaded onto this factor. This suggests that the given items measured a single construct and were related. In addition, Cronbach's alpha was conducted on the ASRBQ to determine internal consistency reliability. As suggested, the results of these analyses can be found in more detail in the results section, but it may be noted here that the Cronbach alpha for these items was .83, which indicates good reliability.

Two open-ended questions were asked at the end of the questionnaire; these questions asked participants to provide motivations for and against engaging in sexual risk behaviours. The questions were taken from Patrick et al. (2010), who conducted a qualitative study examining motivations for and against several adolescent risk behaviours in the Western Cape, South Africa. This was done in order to determine if there exist additional motivating factors that may be particularly relevant to South African youth; these factors, while not the main focus of the study, may provide a foundation for future research on sexual risk behaviour in this context as well as aid in context-specific intervention programs.

PROCEDURE

The study commenced once ethics permission had been granted by the University of the Witwatersrand non-medical ethics committee and permission to approach the students had been obtained from the Gauteng Department of Education and the relevant school heads/principals.

A pilot study was run to assess the acceptability of the adapted PSI (addition of new items as well as the wording/meaning changes to existing items) and the Adolescent Sexual Risk Behaviour questionnaire. First year students across a range of disciplines were approached on campus at the University of the Witwatersrand and invited to participate in the pilot study. An explanation of the voluntary nature of the study, as well as guarantees of anonymity and confidentiality were provided. A participant information sheet was given to participants, and the completion and return of the questionnaire was considered informed consent.

On completion of the pilot, the appropriate changes were made to the instruments as suggested by the pilot data. Thereafter, data collection for the current study began. The researcher addressed the students at a suitable predetermined time and venue with permission of the teacher and school head. The researcher explained the study's aim, and emphasized its voluntary nature and the students' right to withdraw their data at any stage during the data collection period. It was explained that the data will be kept completely confidential in a secure location (a locked drawer/cupboard in the supervisor's office), with access available only to the researcher and research supervisor. In addition, it was emphasized that the questionnaires ask for no identifying information and so remain completely anonymous. All of the data will be destroyed once the final study has been completed and accepted. Those willing to take part in the study were issued with a participant information

sheet to be read by themselves and their parents. They were also given a parental consent form that needed to be signed by their parent/guardian and returned. Participants were thanked for their participation. The researcher's contact details were also provided should the students have any further queries or concerns. The researcher returned the following day to collect the signed consent forms and to provide those participants with questionnaires. The questionnaire took approximately 10 minutes to complete and was completed immediately. Every attempt was made to ensure that as little possible school time was lost. Each participant placed his/her completed questionnaire in the provided envelope and returned it to the researcher.

The researcher assumed a proficient level of English understanding as the primary teaching medium in South Africa is English (Heugh, n.d.; Webb, 1999); however, the researcher offered to provide a translator on site, who would be able to provide translations of the participant information sheet or of any other information that may not be fully understood by a participant.

DATA ANALYSIS

The statistical analyses within this study were executed using SAS enterprise guide version 4.2. Data was coded, entered into Microsoft Excel and then imported into SAS for analysis.

The significance level used in the analyses throughout the study was 5% (.05), except where otherwise indicated.

Parametric assumption checks

This study proposed to use the parametric techniques of correlation, ANCOVA, ANOVA/ t-test and multiple regression in order to answer the postulated research questions. The assumptions inherent in these techniques thus needed to be assured before they could be used. The initial assumption is that of intervally-scaled dependent variables (Howell, 2004). The PSI Acceptance/Involvement subscale has 7 items measured on a 4-point Likert type scale and the Strictness/Supervision subscale has 5 items measured on a 4-point Likert type scale, as well as 1 item measured on a 7-point Likert type scale. These can be assumed to have an adequate interval scale. The items within the Adolescent Sexual Risk Behaviour Questionnaire (5) were measured on a 7-point Likert type scale and thus the score can be assumed to be interval. As all measures appeared to be at least interval, it was assumed that this assumption had been adequately met.

The second assumption required within parametric techniques is that of a random and independent sample (Howell, 2004). The current study made use of a non-probability convenience sampling strategy, which is neither independent nor random. Despite this, it is essential to note ethical constraints as well as logistical concerns frequently preclude the possibility of a random and independent sample in Psychology. In addition, all statistical analyses (parametric and non-parametric) require this assumption to be met. Accordingly, it has been assumed so that analyses may be carried out.

The assumption of normally distributed dependent variables is the third that must be met in order to perform parametric analyses (Howell, 2004). Consequently, histograms and Kolmogorov-Smirnov tests were produced for ASRB scores and PSI scores, as well as for SES, age of the caregiver, age of sexual debut and number of sexual partners [see Appendix H]. The histograms were examined and it was discovered that the ASRB scores were skewed to the right, while the PSI scores (total, acceptance/involvement scale and supervision/strictness scale) were slightly skewed to the left. Age of the caregiver and number of sexual partners was slightly skewed to the right, with age of sexual debut slightly skewed to the left. However, the Kolmogorov-Smirnov D value did not exceed 1 or -1 in any of the analyses, which suggests that the data can be assumed to have the acceptable level of normality to warrant the use of parametric analyses (Sheskin, 2004).

The final assumption of parametric techniques prescribes that the variances among groups should be equal (Howell, 2004). This assumption applies solely to the ANCOVA and ANOVA/t-test analyses. This was checked through the use of Levene's test where applicable. Where the results did not show homogeneity of variance, the appropriate non-parametric equivalent analysis was used.

Reliability

As measures of reliability have not been obtained for these instruments in their adapted form, reliability checks for the PSI and the ASRBQ were appropriate in order to determine their specific reliability within this study, and the South African context. Cronbach's coefficient alphas were used to calculate the internal consistency reliability for both the PSI and the MSLQ.

Primary questions: the existence of a relationship

Pearson's product moment correlation coefficient (or the non-parametric equivalent of Spearman's rank product moment correlation coefficient) was calculated between sexual risk behaviour and socio-economic status as well as between sexual risk behaviour and the interval parenting style score. This addressed the two primary research questions surrounding the potential existence of relationships between the constructs.

Secondary questions: assessing the nature of the relationship [moderators]

The first and second subsidiary questions were answered using a two-way ANOVA, with parenting style and SES acting as the independent variables (IVs)/moderator IVs. Sexual risk behaviour acted as the dependent variable.

Secondary questions: additional factors affecting the relationship

A similar two-way ANCOVA was conducted in order to answer the third subsidiary question, with the age of the parent/guardian as the covariate. This enabled the researcher to control the effect that the caregiver's age has, if any, on the above-mentioned moderation relationships.

Secondary questions: the existence of mediators

To answer the fourth of the secondary research questions, mediated multiple analyses were run, following Baron and Kenny's (1986) model.

Secondary questions: additional factors affecting the relationship

The fifth research question was addressed using two ANOVAs (or appropriate non-parametric equivalents). The identity of the caregiver was the selected IV in both cases, with sexual risk behaviour and parenting style scale scores as the DV respectively.

Secondary questions: differences across demographic groups

The sixth research question was answered through the use of appropriate parametric (or non-parametric equivalent) ANOVAs and t-tests. These tests were conducted to examine whether differences exist between/among the demographic subgroups of gender, population group, parental education level, and family structure (as independent variables) against the dependent variables of sexual risk behaviour and parenting style scores.

Secondary questions: the existence of a relationship

The final quantitative secondary question was addressed through the use of Pearson's product moment correlation coefficient (or the non-parametric equivalent of Spearman's rank product moment correlation coefficient). This was conducted between age of sexual debut, the number of total sexual partners and the sexual risk measure score to determine the possible existence of relationships among these constructs.

'Qualitative' question

The qualitative subsidiary research question was explored through quantitative content analysis. Content analysis enabled the provision of an overview of these motivations as well as the relative importance of each motivation (Blaxter, 1983 as cited by Wilkinson, 2000).

ETHICAL CONSIDERATIONS

Informed consent was obtained from all parties. This is particularly pertinent in this study as the majority of the participants were under 18 years of age, which leads to the ethical requirement of both parental informed consent and participant informed assent. The former was gained through the participant information sheet [see Appendix A] and the parental informed consent form [see Appendix B] issued as discussed in the procedural section. The form, which was detached, signed by the parents and returned to the school and the researcher, stated the parents' consent to allow their child/dependent to participate in the study. The participants only received questionnaires once the consent forms had been signed and returned. As the questionnaires were separate from the consent forms, the data remained strictly anonymous. Further, participants' confidentiality was protected

through the additional use of sealed envelopes for the questionnaires as discussed in the procedural section.

The participant information sheet, which was removed, kept and read by both parents and students, stated the nature of the study as well as the participants' rights to anonymity, confidentiality and the right to withdraw from the study without repercussion, which would have led to any personal data being removed from the study and destroyed. The removal of this information sheet coupled with the completion of a questionnaire was considered informed assent. The researcher had a translator on site if requested as discussed in the procedural section, in order to ensure full comprehension of all participants.

As stated, any research generated from the data will be available to interested parties should they request it and the researcher's contact details were supplied to all participants in the event that they have any further queries or concerns. The researcher provided an email address to the participants, and explained that they should send a request with the subject line "Research Results" should they wish to obtain a copy of the completed report. While this does violate anonymity to some degree, it would be solely at the participant's discretion to do so. Further, a summary of the final report will be available to the participating schools.

While the researcher anticipated no resulting distress for students due to participation in the study, there was the possibility that students may become upset if the questions bring parental, family or sexual-related problems to the fore. As such, the contact details for the school guidance counsellor, Lifeline, Childline, FAMSA and The Central Gauteng Mental Health Society were provided to all participants so that they may seek free counselling if required.

Ethical issues relating to the pilot included similar anonymity and confidentiality guarantees as the questionnaire asked for no identifying information and all of the pilot and study data was kept in a locked drawer/cupboard in the supervisor's office. Further, the completion and return of the questionnaire acted as informed consent, no distress was anticipated from the pilot study and the pilot and study data will be destroyed after completion and final hand in of the report.

An important note is the possibility that, given the nature of the topic, sensitive information may have been revealed by the participants in the open ended question section of the questionnaire. Given that the responses by participants are anonymous, no direct intervention will be possible. However, should a systematic ethical concern be raised by children in a particular school (such as sexual abuse or sex for goods/money from teachers or community members), this will be reported to the school and the necessary authorities.

CHAPTER FOUR: RESULTS

RESULTS

This study attempted to ascertain whether a relationship existed between the given constructs, and if such a link were to be found, to test the possibility of the relationship existing through differing mediation and/or moderation models. It also aimed to examine if any differences were present in the constructs across demographic groups. The results of the analyses used to answer these questions are found below.

The primary question of a relationship was explored through the correlation analyses: Pearson's product moment correlation coefficient was calculated between parenting styles (total scale scores, acceptance/involvement scores, and supervision/strictness scores) and sexual risk behaviour, as well as between sexual risk behaviour and SES.

The secondary questions concerning the possibility of a moderation relationship were addressed through the use of a two-way ANOVA, with sexual risk behaviour scores used as the dependent variable. Parenting style and SES were used as IVs. An ANCOVA was also conducted, with caregiver age as the covariate, in order to determine the effect this variable may have on the moderated relationships .

The secondary question concerning a mediation relationship was addressed through mediated regression analyses: sexual risk behaviour scores were regressed on SES. Hereafter, parenting style scale scores were regressed on SES. Finally, sexual risk behaviour scores were regressed on the parenting style scale scores and on SES (Baron & Kenny, 1986; Judd & Kenny, 1981; Grolnick & Slowiaczek, 1994).

Two ANOVAs were conducted to assess the possibility of parenting style scale scores and sexual risk behaviour scores (as dependent variables) differing according to the identity of the caregiver (as the independent variable).

Those questions assessing differences across demographic groups for the dependent variables of sexual risk behaviour and parenting style scale scores were addressed through the use of ANOVAs/t-tests where the variables of gender, population group, parental education level, and family unit type were used as IVs. Age was not examined as the majority of the participants were either 16 or 17, indicating a relative homogeneity for this variable.

The penultimate question as regards the existence of a relationship between age of debut, number of sexual partners, and sexual risk behaviour scores was assessed by Pearson's product moment correlation coefficient.

The final question made use of quantitative content analysis, in order to determine patterns of reasoning as regards engaging in sexual risk behaviour. Data was coded into categories (derived from the data) that "summarize[d] and systematize[d] the content of the data" (Wilkinson, 2000, p.434). The frequency of responses in each category provided numerical data as to the most common motivations for and against engaging in sexual risk behaviour (Wilkinson, 2000).

Summary statistics

The summary statistics of mean, standard deviation, minimum and maximum for all of the interval scaled variables in the study are presented in Table 2.

Table 2

Summary statistics

Variable	Mean	Std Dev	Minimum	Maximum	N
Sexual risk behaviour	1.98	4.57325	0.0	29.0	366
PS Acceptance score	21.71	4.38031	8.0	28.0	366
PS Strictness score	18.95	5.15088	6.0	27.0	366
PS total score	40.66	6.74797	20.0	55.0	366
SES individual	3.16	1.49715	0.0	6.0	260
SES neighbourhood	2.40	0.72	1.0	3.0	366
Age of caregiver	44.70	8.51	22	83	288
Age of sexual debut	14.69	9.2	11	18	76
Number of sexual partners	3.65	9.2	1	11	67
Age of participants	16.36	1.04	15	20	366

Instrument reliability

Cronbach's coefficient alpha was used to calculate the reliability (internal consistency) of the PSI and the ASRBQ. This coefficient was calculated for the total score of the PSI as well as for both of the subscales therein. In this study, the appropriate values to convey acceptable reliability were required

to be .70 and above (Cohen & Swerdlik, 2005). The results of the Cronbach Coefficient Alpha analyses are presented in Tables 3 and 4 below.

Adapted PSI

As seen in Table 3, the Cronbach Alpha Coefficient for the total PSI scale is .72. This is an adequate value and conveys the acceptable internal consistency of the scale. The Cronbach Alpha values for both the Acceptance/Involvement and Strictness/Supervision subscales are good, which support the notion of sound internal consistency reliability.

Table 3

Cronbach's Alpha coefficients for the Adapted PSI subscales

Section	Alpha coefficient
Total PSI scale	0.72
Acceptance/Involvement subscale	0.78
Strictness/Supervision subscale	0.79

ASRBQ

As in Table 4, the Cronbach Alpha Coefficient for the ASRBQ is .83. This again suggests an appropriate level of internal consistency reliability.

Table 4

Cronbach's Alpha coefficients for the ASRBQ

Scale	Alpha coefficient
Total ASRBQ scale	0.83

Conclusion

On the basis of these analyses, it was concluded that both the ASRBQ and the PSI had adequate to good internal consistency reliability. As a result, the scales can be said to show adequate reliability for analysis purposes.

PSI equivalence

Correlation analyses were conducted in order to determine the extent to which the cut-down version of the PSI as used in this study was equivalent to the original PSI as utilised in previous literature. The results of these analyses are presented in Table 5 below, by total and subscale.

Table 5

Pearson's Correlation coefficients: original PSI total score and PSI subscales, with cut-down PSI total score and PSI subscales

Pearson's Correlation Coefficients			
Variable	Original PSI total	Original PS Acceptance/Involvement	Original Supervision/Strictness
Cut-down PSI Total Score	0.80632***		
Cut-down PS Acceptance/Involvement		0.97966***	
Cut-down PS Supervision/Strictness			0.65172***

* $p < .005$

*** $p < .0001$

These results demonstrate significant links between the cut-down and original versions of the PSI. These correlations, all significant at $p < .0001$, are strong to very strong and positive, indicating that the scales are closely related and confirming an expected directionality. This suggests that the cut-down version of the PSI closely approximates the original version and thus can be used in this study with a high degree of confidence.

In addition, the reliability (Cronbach's alpha) for the original version scales of acceptance/involvement and supervision/strictness was .80 and .64 respectively. In contrast, the current reliability lies at .78 and .79 respectively. While the acceptance/involvement scale shows a slight decrease in reliability from the original, the supervision/strictness scale shows a considerable increase and the overall reliability of the adapted PSI (both scales) is better at .72 in comparison to .70. Further, this version also displays firmer construct validity, as while the cut-down version shows a two-factor model, the original PSI loaded onto four factors, suggesting a dissonance between the actual factors being measured in contrast to those purported to be measured.

Primary research questions: relationship (correlation) results

The results of the correlations conducted to ascertain the possibility of the existence of a relationship between parenting style and sexual risk behaviour, and SES and sexual risk behaviour can be found collectively below in Table 6.

Table 6

Pearson's Correlation coefficients: PSI total score, PSI subscales, and SES (neighbourhood and individual) with sexual risk behaviour

Pearson's Correlation Coefficients	
Variable	Sexual risk behaviour
PSI Total Score	-0.21313***
PSI Acceptance/Involvement	-0.14967*
PSI Supervision/Strictness	-0.15194*
SES Individual	-0.2605
SES Neighbourhood	-0.24661***

*p < .005 ***p < .0001

There was no significant relationship between sexual risk behaviour and individual SES. Sexual risk behaviour was significantly correlated with the PSI total score ($r = -.21, p < .0001$), as well as with the subscales of acceptance/involvement ($r = -.14, p = .0041$), and supervision/strictness ($r = -.15, p = .0036$). All of these relationships were negative, indicating expected directional relationships in that high levels of acceptance/involvement and supervision/strictness are both associated with lower sexual risk behaviour scores. The correlations were also all weak, at .15 to .20.

Sexual risk behaviour was also significantly correlated with neighbourhood SES ($r = -.24, p < .0001$). This relationship was negative, indicating that higher SES is associated with lower sexual risk behaviour. However, this relationship, while significant, was weak, as similarly seen with the aforementioned results. This may suggest that the relationship significance may be somewhat inflated by the moderate sample size ($n = 366$). One-way ANOVAs were conducted in addition at this point in order both to confirm the possibility of an effect of parenting styles and SES on sexual risk behaviour and to examine the effect size of such an influence. The results are reported below in Tables 7 and 8.

Table 7

ANOVA table with SES neighbourhood and sexual risk behaviour

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	534.068252	267.034126	13.65	<.0001
Error	363	7099.756885	19.558559		
Corrected Total	365	7633.825137			

$$\eta^2 = .07$$

Table 8

ANOVA table with Parenting style type and sexual risk behaviour

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	249.219563	83.073188	4.07	0.0073
Error	363	7384.605574	20.399463		
Corrected Total	365	7633.825137			

$$\eta^2 = .03$$

These results confirm that both SES and parenting style have an influence on sexual risk behaviour ($F_{2, 363}=13.65, p<.0001$ and $F_{3, 362}=4.07, p=.0073$ respectively), and demonstrate weak to moderate effect sizes ($\eta^2=.03$ and $.07$ respectively for parenting style and SES) which suggest that the practical effects of these variables are adequate but may be inflated by sample size. Previous literature does not seem to provide effect sizes or r-squared scores and as such, this result cannot be compared to previous studies; however, it can be surmised that the weak to moderate effect sizes may indicate that, while SES and parenting style do go part way to explain sexual risk behaviour variance, there may be alternate, additional factors not examined in this study that also impact sexual risk behaviour scores.

As such, it is clear that there exists a relationship between sexual risk behaviour and parenting style, as well as between sexual risk behaviour and neighbourhood SES, despite a lack of relationship between sexual risk behaviour and *individual* SES. This suggests that the primary questions can be answered in the affirmative, with a caveat around nature of the sexual risk behaviour – SES relationship, or alternatively, an exploration around what each SES measure is assessing.

Secondary questions

Question (a) and (b): moderation (2-way ANOVA) results

A two-way ANOVA was conducted to assess the possibility that SES and parenting styles respectively acted as moderators on parenting style-sexual risk behaviour and SES-sexual risk behaviour relationships. In the analysis, nominal parenting styles (Authoritative, Authoritarian, Neglectful, and Indulgent) and nominal SES were used as the IVs, with sexual risk behaviour as the DV. The results can be found in Table 9 below.

Table 9***Two-way ANOVA results for parenting styles and SES with sexual risk behaviour***

Source	DF	Type III SS	Mean Square	F Value	Pr > F
SES	2	795.1597686	397.5798843	22.32	<.0001
Parenting style	3	525.2510895	175.0836965	9.83	<.0001
SES*Parenting style	6	230.1911497	38.3651916	2.15	0.0469

$$\eta^2_{\text{global}} = .17$$

There was a significant main effect of both parenting style ($F_{3, 354}=9.83, p<.0001$) and SES ($F_{2, 354}=22.32, p<.0001$), as well as for the interaction ($F_{6, 363}=2.15, p=.0469$). This suggests that there is a relationship between parenting style and SES that affects sexual risk behaviour. While the global effect size was strong at .17, the eta squared for the interaction was weak at .03 suggesting that this IV interaction results in only small real-world differences in sexual risk behaviour. This again speaks to the potential for additional factors affecting this construct. Table 10 below represents a table of least-squared means for these constructs.

Table 10***Sexual risk behaviour LS Means for parenting style*SES***

SES	Parenting style	Sexual risk behaviour LSMean	LSMean Number
H	Authoritarian	0.6129032	1
H	Authoritative	0.0625000	2
H	Indulgent	1.3376623	3
H	Neglectful	2.0175439	4
L	Authoritarian	3.0000000	5
L	Authoritative	4.6363636	6
L	Indulgent	10.0000000	7
L	Neglectful	8.7500000	8
M	Authoritarian	1.0243902	9
M	Authoritative	0.2058824	10
M	Indulgent	2.8461538	11
M	Neglectful	5.0666667	12

Post-hoc Tukey's tests suggest that approximately 20 significant differences in mean exist across these constructs. For ease of reading, these have been summarised in the table (Table 11) below.

Table 11

Summarised significant post-hoc Tukey's comparisons

Comparison	p-value	Comparison	p-value
Authoritarian in high SES [$M=0.6$] < sexual risk behaviour (SRB) than Authoritative in low SES [$M=4.6$]	.0335	Authoritarian in low SES [$M=3.0$] < SRB than Indulgent in low SES [$M=10.0$]	.0461
Authoritarian in high SES [$M=0.6$] < SRB than Indulgent in low SES [$M=10.0$]	.0003	Authoritative in low SES [$M=0.2$] < SRB than Authoritative in medium SES [$M=4.6$]	.0081
Authoritarian in high SES [$M=0.6$] < SRB than Neglectful in low SES [$M=8.75$]	.0168	Indulgent in low SES [$M=10.0$] > SRB than Authoritarian in medium SES [$M=1.02$]	.0006
Authoritarian in high SES [$M=0.6$] < SRB than Neglectful in medium SES [$M=5.07$]	.0027	Indulgent in low SES [$M=10.0$] > SRB than Authoritative in medium SES [$M=0.21$]	.0001
Authoritative in high SES [$M=0.06$] < SRB than Authoritative in low SES [$M=4.6$]	.0061	Neglectful in low SES [$M=8.75$] > SRB than Authoritarian in medium SES [$M=1.02$]	.0263
Authoritative in high SES [$M=0.06$] < SRB than Indulgent in low SES [$M=10.0$]	<.0001	Neglectful in low SES [$M=8.75$] > SRB than Authoritative in medium SES [$M=0.21$]	.0083
Authoritative in high SES [$M=0.06$] < SRB than Neglectful in low SES [$M=8.75$]	.0068	Authoritarian in medium SES [$M=1.02$] < SRB than Neglectful in medium SES [$M=5.07$]	.0046
Authoritative in high SES [$M=0.06$] < SRB than Neglectful in medium SES [$M=5.07$]	.0003	Authoritative in medium SES [$M=0.21$] < SRB than Neglectful in medium SES [$M=5.07$]	.0004
Indulgent in high SES [$M=1.34$] < SRB than Indulgent in low SES [$M=10.0$]	.0007	Neglectful in high SES [$M=2.02$] < SRB than Indulgent in low SES [$M=10.0$]	.0035
Indulgent in high SES [$M=1.37$] < SRB than Neglectful in low SES [$M=8.75$]	.0330	Indulgent in high SES [$M=1.37$] < SRB than Neglectful in medium SES [$M=5.07$]	.0029

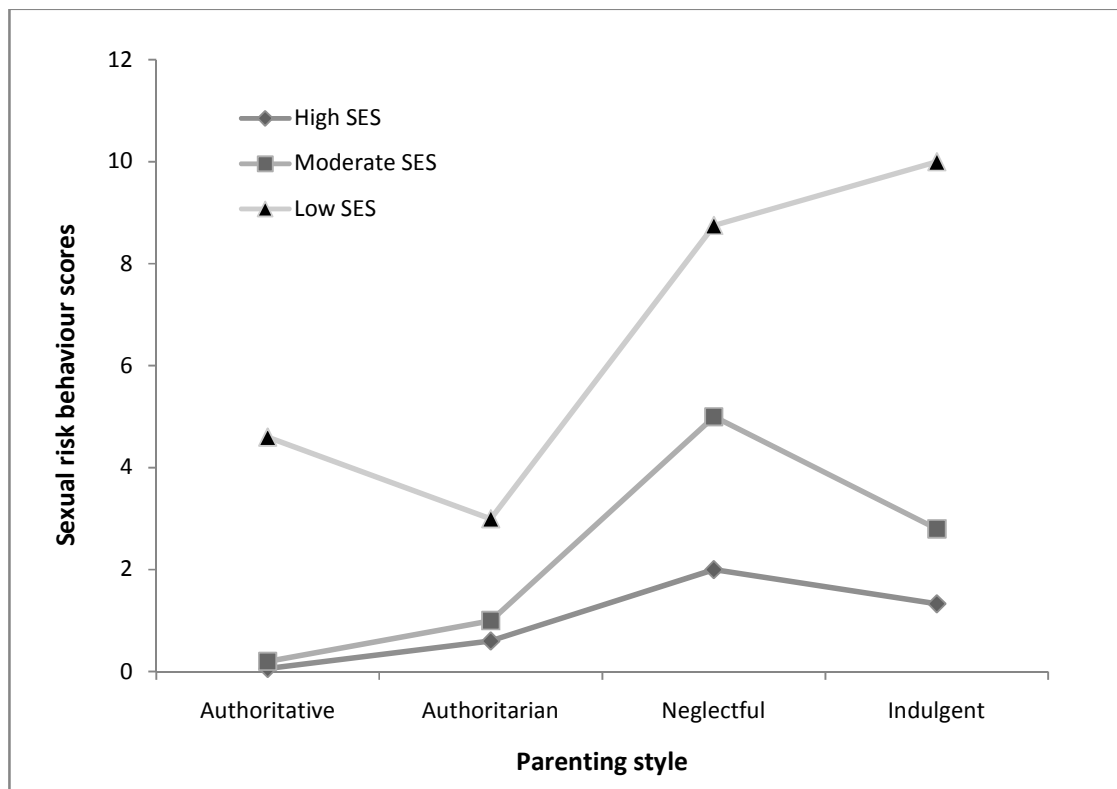
In sum, it is clear that parenting style and SES interact in multiple ways to affect sexual risk behaviour. There is evidence for SES as a moderator, as those individuals whose parents share styles

differ along sexual risk behaviour levels; this can be seen in the example of those with indulgent parents and high SES contexts engage in less sexual risk taking [$M=1.34$] behaviours than those with indulgent parents in low SES contexts [$M=10.0$]. There is also evidence for parenting style as a moderator in that individuals with similar SES backgrounds have differing sexual risk behaviour patterns according to their parents' style of engagement. For example, those with authoritative parents and medium SES contexts engage in less sexual risk taking [$M=0.21$] behaviours than those with neglectful parents in medium SES contexts [$M=5.07$].

In addition, it seems clear that those with the worst outcomes (highest sexual risk behaviour) are those with indulgent or neglectful parenting in low SES conditions, while the lowest sexual risk taking was linked to Authoritative and Authoritarian parenting (in high or low SES conditions), and high SES conditions in general. This can be seen in Figure 2 below.

Figure 2

Moderation interaction of PS and SES on sexual risk behaviour



Question (c): affect of age of the caregiver on moderation models (2-way ANCOVA results)

A two-way ANCOVA was conducted in order to determine whether, if the age of the caregiver was controlled, this would affect the moderation relationships seen in the above question. The results are found in Table 12.

Table 12

ANCOVA table for sexual risk behaviour – parenting styles*SES with caregiver age as a covariate

Source	DF	Type III SS	Mean Square	F Value	Pr > F
SES	3	544.7649086	181.5883029	9.44	<.0001
Parenting style	2	868.2117010	434.1058505	22.56	<.0001
SES*Parenting style	6	344.5576277	57.4262713	2.98	0.0077
Age of caregiver	1	38.0042582	38.0042582	1.98	0.1610

Global $\eta^2 = .23$

The result of the ANCOVA was significant ($F_{6, 273} = 2.98, p = .0077$). This suggests that differences in sexual risk behaviour do exist by parenting style - SES interaction relationship when the covariate of caregiver age is controlled for. Tukey's post-hoc analyses demonstrated a similar number and content of significant differences as in the above analysis and, together with the strong effect size ($\eta^2 = .23$) suggest that real differences exist, in isolation of the covariate influence.

In addition, correlations were run to determine the existence of a relationship between age of the caregiver and the main variables of PS scores, SES, and sexual risk behaviour. The results are presented below in Table 13.

Table 13

Pearson's Correlation coefficients: PSI subscales, Sexual risk behaviour and SES with age of the caregiver

Pearson's Correlation Coefficients	
Variable	Age of caregiver
PSI Acceptance/Involvement	-0.01700
PSI Supervision/Strictness	0.13697*
Sexual risk behaviour	0.04974
SES Neighbourhood	-0.12247*

* $p < .005$

*** $p < .0001$

The age of the caregiver is not significantly related to PS acceptance/involvement scores ($r = -.01$, $p = .7747$), or levels of sexual risk behaviour ($r = -.04$, $p = .4021$). However, it was significantly related to PS supervision/strictness scores ($r = .13$, $p = .0205$) and to SES ($r = -.12$, $p = .0385$). The direction of these relationships suggests that levels of supervision/strictness increase with caregiver age, and that caregivers are more likely to be older in lower SES areas (inverse relationship between age of the caregiver and SES). These correlations are weak in size.

Question (d): mediation (regression) results

In order to determine the possibility of a mediation model, mediated multiple regression analyses were run. Baron and Kenny's (1986) model was followed: it was first necessary to ascertain whether the independent variable (SES) was linked to the dependent variable (sexual risk behaviour). The independent variable then had to be linked to the mediator variable (parenting style). The link between the independent and dependent variables should be absent or significantly reduced when the mediator variable is controlled for (Baron & Kenny, 1986; Judd & Kenny, 1981; Grolnick & Slowiaczek, 1994). This was done using the following regressions: sexual risk behaviour was regressed on SES; parenting style scores (Acceptance/Involvement and Supervision/Strictness

scores) were regressed on SES; sexual risk behaviour was regressed on both the parenting style scores and SES. The results are presented below in Tables 14 – 16.

Tables 14 - 16

Regression results for mediated multiple regression

Table 14

Sexual risk behaviour regressed on SES

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F	R-square
Model	1	464.24764	464.24764	23.57	<.0001	0.0608
Error	364	7169.5774	19.69664			
Corrected Total	365	7633.8251				
Variable	DF	t-value	Pr > t	Tolerance value		
Intercept	1	7.10	<.0001	.		
SES	1	-4.85	<.0001	1.00000		
Collinearity Diagnostics						
Number	Eigenvalue	Condition Index	Proportion of Variation			
			Intercept		SES	
1	1.95779	1.00000	0.02111		0.02111	
2	0.04221	6.81003	0.97889		0.97889	

Table 15***Parenting styles regressed on SES***

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F	R-square
Model	1	1514.77197	1514.77197	36.50	<.0001	0.0911
Error	364	15106	41.49873			
Corrected Total	365	16620				
Variable	DF	t-value	Pr > t	Tolerance value		
Intercept	1	40.50	<.0001	.		
SES	1	-6.04	<.0001	1.00000		
	Collinearity Diagnostics					
Number	Eigenvalue	Condition Index	Intercept	Proportion of Variation		
					SES	
1	1.98654	1.00000	0.00673	0.00673	1.98654	
2	0.01346	12.14938	0.99327	0.99327	0.01346	

Table 16**Sexual risk behaviour regressed on parenting styles and SES**

Source	DF	Sum Squares	Mean Square	F Value	Pr > F	
Model	3	1263.75816	421.25272	23.94	<.0001	
Error	362	6370.06697	17.59687			
Corrected Total	265	7633.82514				
Variable	DF	t-value	Pr > t	Tolerance value		
Intercept	1	9.06	<.0001	.		
SES	1	-7.21	<.0001	0.99184		
PS A/I	1	-2.47	.0141	0.77734		
PS S/S	1	-6.17	<.0001	0.78257		
Collinearity Diagnostics						
Number	Eigenvalue	Condition	Proportion of Variation			
		Index	Intercept	PS A/I score	PS S/S score	SES
1	3.84152	1.00000	0.00100	0.00256	0.00407	0.00342
2	0.11087	5.88625	0.00015237	0.00000143	0.30518	0.22876
3	0.03656	10.24991	0.00001621	0.69974	0.27989	0.26358
4	0.01105	18.64851	0.99883	0.29770	0.41086	0.50424

All of the models run were found to be significant ($F_{1, 364}=23.57$, $p<.0001$, $r^2=.06$, $F_{1, 364}=36.50$, $p<.0001$, $r^2=.09$, and $F_{3, 362}=23.94$, $p<.0001$, $r^2=.16$ respectively). This suggests that the SES acts as an explanatory IV in relation to sexual risk behaviour (step one of the model). In addition, SES as an explanatory IV is linked to parenting style as a potential mediator variable (step two). The third regression suggests that sexual risk behaviour can be explained through parenting styles (mediator linked to DV). However, the final step to ensure complete or partial mediation requires that the SES – sexual risk behaviour path no longer exists or is reduced when parenting style is controlled; this has not occurred and as such, there is no mediation present.

The multicollinearity tables for all analyses provide information regarding the interdependency of the variables. As shown in the tables, all tolerance values provided are close to 1. This indicates little concern about multicollinearity, as values close to 0 indicate problematic interdependency.

Question (e): identity of the caregiver influence (ANOVA) results

Two t-tests were conducted in order to assess the possibility that parenting style and sexual risk behaviour scores may differ by caregiver identity. As 85.03% of the sample was raised by either a mother or father, the remaining caregivers (aunt/uncle, grandparents, guardian, sibling, childheaded) were grouped as one (non-parent caregiver). The results of these analyses are presented below in Table 17.

Table 17

T-test results for sexual risk behaviour and parenting styles with caregiver identity

Variable	Method	Variances	DF	t-value	Pr > t
Sexual risk behaviour	Pooled	Equal	667	-0.76	0.4488
PS acceptance/involvement	Pooled	Equal	312	3.26	0.0012
PS supervision/strictness	Pooled	Equal	312	-2.72	0.0069

Sexual risk behaviour showed no significant differences indicating that no differences exist in this construct with differing caregiver identities. This means that sexual risk is not affected (in this sample) by *whom* one's caregiver is (e.g. mother, father, aunt, sister). However, supervision/strictness and acceptance/involvement did shown to differ significantly by caregiver ($t_{312} = -2.72, p = .00069$, *Cohen's d* = .41, and $t_{312} = 3.26, p = .00012$, *Cohen's d* = .48 respectively). An analysis of means demonstrates that those who reported a mother or father as their primary caregiver showed greater levels of acceptance/involvement ($M = 21.86$) than those who reported an alternate caregiver ($M = 19.62$). In addition, those individuals with a parent as their primary caregiver reported lower levels of supervision/strictness ($M = 18.65$) than those with an alternate caregiver ($M = 20.85$). The effect sizes for these results reveal that the found differences are moderate in practical size.

Question (f): demographic difference (ANOVAs and t-tests) results

In order to assess whether the demographic variables of gender, population group, parental education level and family structure have an effect on parenting styles and sexual risk behaviour.

The former four variables acted as IVs, with parenting style and sexual risk behaviour scores as DVs. The results are reported below by dependent variable.

Sexual risk behaviour

ANOVAs were run with the following IVs: population group and family structure. The sample consisted of 28.14% White and 60.11% Black learners, with only 11.75% other racial groups, which were combined for this analysis. Similarly, the family structures included in the sample comprised only 13.70% step parent families and 12.05% 'other' family situations; as such, these two groups were combined into one, resulting in three groups (two natural parents, single parent, combined step and 'other'). The results are presented in Tables 18 and 19.

Table 18

ANOVA table with sexual risk behaviour score and population group

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	34.207454	17.103727	0.82	0.4434
Error	362	7595.693916	20.982580		
Corrected	364	7629.901370			
Total					

No significant differences were found in terms of sexual risk behaviour for different population groups.

Table 19

ANOVA table with sexual risk behaviour score and family structure

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	149.836321	74.918161	3.63	0.0276
Error	362	7480.065048	20.663163		
Corrected	364	7629.901370			
Total					

Sexual risk behaviour showed significant differences by family structure ($F_{2, 364}=3.63, p=.0276$), with Post-hoc Tukey's tests demonstrating that families with two biological parents, showing the lowest levels of sexual risk behaviour ($M=1.2$), were significantly different from those with a single parent, which demonstrated the highest levels of sexual risk behaviour ($M=2.6$).

Two sample t-tests were conducted with the following variables as IVs: parental education level, and gender. The results are presented in below in Table 20.

Table 20

T-test table for sexual risk behaviour and demographic IVs

Variable	Method	Variances	DF	t-value	Pr > t
Gender	Satterthwaite	Unequal	266.98	-3.53	0.0005
Parental education level/Individual SES	Pooled	Equal	256	-1.25	0.2118

The Levene's test for variance equality showed that unequal variances existed across gender groups ($t_{157, 207}=2.05, p<.0001$). As a result, the Satterthwaite value was used, and significant results were demonstrated ($t_{266.98}=-3.53, p=.0005$, *Cohen's d*=-.38) where males reported higher sexual risk behaviour scores ($M=2.97$) than females ($M=1.22$). The effect size is moderate, but this result may be a function of both over-reporting by males and under-reporting by females.

There was no significance found for parental education level/individual SES, suggesting that sexual risk behaviour does not differ according to the education level of one's parents.

PS Acceptance/Involvement

ANOVAs were run with the following IVs: population group and family structure. These were combined as above. The results are presented in Tables 21 and 22.

Table 21***ANOVA table with PS Acceptance/Involvement scores and population group***

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	131.556171	65.778086	3.48	0.0319
Error	362	6843.687664	18.905215		
Corrected	364	6975.243836			
Total					

Significant differences were found for population group ($F_{2, 364}=3.03, p=.03$). Tukey's post hoc testing revealed that Black learners ($M=21.2$) reported significantly lower levels of acceptance/involvement from their parents than did White learners ($M=22.6$). However, the weak effect size ($\eta^2=.02$) suggests that these differences are not wide in practice.

Table 22***ANOVA table with PS Acceptance/Involvement scores and family structure***

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	322.682947	161.341473	8.78	0.0002
Error	362	6652.560889	18.377240		
Corrected	364	6975.243836			
Total					

Significant differences were also found for family structure/unit type ($F_{2, 364}=8.78, p=.0002$). Tukey's post-hoc analyses demonstrated that living with both parents ($M=22.80$) resulted in significantly greater levels of acceptance/involvement than either living with one parent ($M=20.78$) or living in another situation (step-parents, grandparents, guardians, etc.) ($M=21.05$). However, a weak effect size ($\eta^2=.05$) suggests that this difference may be small in terms of practical weight.

Two sample t-tests were conducted with the following variables as IVs: parental education level, and gender. The results are presented in below in Table 23.

Table 23**T-test table for PS Acceptance/Involvement and demographic IVs**

Variable	Method	Variances	DF	t-value	Pr > t
Gender	Pooled	Equal	364	1.14	0.2556
Parental education level/Individual SES	Satterthwaite	Unequal	246.14	2.77	0.0061

Acceptance/Involvement was not shown to differ significantly across gender groups. However, these scores did demonstrate variation by parental education level/individual SES. The Levene's test for variance equality showed that unequal variances existed across parental education level groups ($t_{154,102}=1.53, p=.0223$). As a result, the Satterthwaite value was used, and significant results were demonstrated ($t_{246.14}=2.77, p=.0061, \text{Cohen's } d=.34$) where there were greater acceptance/involvement scores for the high parental education level/individual SES group ($M=22.59$) than for the low parental education level/individual SES group ($M=21.12$).

PS Supervision/Strictness

ANOVAs were run with the following IVs: population group and family structure. These were again combined as above. The results are presented in Tables 24 and 25.

Table 24**ANOVA table with PS Supervision/Strictness scores and population group**

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	2117.013039	1058.506520	50.67	<.0001
Error	362	7562.778742	20.891654		
Corrected Total	364	9679.791781			

Significant differences were demonstrated across population group ($F_{2,364}=50.67, p<.0001$). Post-hoc Tukey's testing showed that Black participants ($M=20.85$) reported significantly higher levels of supervision/strictness than White ($M=15.50$) and other race [Indian, Coloured, Asian, biracial]

($M=17.43$) participants. Notable here is the strong effect size ($\eta^2=.20$), indicating the considerable practical significance of this difference.

Table 25

ANOVA table with PS Supervision/Strictness scores and family structure

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	243.905160	121.952580	4.71	0.0096
Error	362	9375.097580	25.898060		
Corrected	364	9619.002740			
Total					

Significant differences were found across family unit type ($F_{2, 364}=4.71$, $p=.0096$). Post-hoc Tukey's for family structure showed that those participants who live with two biological parents ($M=17.97$) reported lower levels of supervision/strictness than those living in another situation ($M=19.82$) (e.g. step-parents, grandparents, siblings, guardian, childheaded).

Two sample t-tests were conducted with the following variables as IVs: parental education level, and gender. The results are presented in below in Table 26.

Table 26

T-test table for PS Supervision/Strictness scores and demographic IVs

Variable	Method	Variances	DF	t-value	Pr > t
Gender	Pooled	Equal	364	6.24	<.0001
Parental education level/Individual SES	Pooled	Equal	256	-2.57	0.0106

These results demonstrated that levels of supervision/strictness differed significantly across gender ($t_{364}=6.24$, $p<.0001$, *Cohen's d*=.66), with males detailing lower levels of supervision/strictness ($M=17.11$) than females ($M=20.34$). This expected difference was linked with a strong effect size,

substantiating its significance. In addition, significant differences were shown by parental education level ($t_{256}=-2.57$, $p=.0106$, *Cohen's d* = -.33). Those individuals whose parents had a lower level of education showed significantly higher levels of supervision/strictness ($M=19.8$) than those whose parents had a higher education ($M=18.2$)

Question (g): relationship (correlation) results

Correlation analyses were conducted to assess the hypothesis that sexual risk behaviour, age of sexual debut, and number of sexual partners were related. The correlation results are reported on in Table 27 below.

Table 27

Pearson's Correlation coefficients: Sexual risk behaviour, age of sexual debut, and number of sexual partners

Pearson's Correlation Coefficients		
Variable	Sexual risk behaviour	Number of sexual partners
Age of sexual debut	-0.36559*	-0.33575*
Number of sexual partners	0.47602***	

* $p < .005$

*** $p < .0001$

Sexual risk behaviour was significantly related to age of sexual debut ($r=-.36$, $p=.0011$). This correlation was moderate in strength and was negative, indicating an expected directional relationship (the higher one's level of sexual risk behaviour, the lower the age of sexual debut). Sexual risk behaviour also demonstrated a significant relation to number of sexual partners ($r=.47$, $p<.0001$). This moderate correlation was positive, again an expected directional relationship as a high level of sexual risk behaviour would be associated with a high number of sexual partners. Age of sexual debut and number of sexual partners were also significantly and moderately correlated ($r=-.33$, $p=.0067$) indicating that lower age of sexual debut was linked to a greater number of sexual partners.

Question (h): additional factors motivating for or against sexual risk behaviour engagement

A quantitative content analysis (QCA) was conducted in order to determine the most commonly cited motivations for and against engaging in HIV-related sexual risk behaviour. The results of this analysis can be found in Table 28 below.

Table 28

QCA results table displaying motivations for and against engaging in sexual risk behaviour and their frequency

Motivation against engaging in sexual risk behaviour	Frequency of this motivation	Motivation for engaging in sexual risk behaviour	Frequency of this motivation
1. Fear of STDs/HIV/AIDS or pregnancy	115	1. Media or peer pressure, wanting to fit in, prove that you are cool/a man, competition	65
2. Religion (values, beliefs, and culture)	75	2. Experimentation, curiosity, boredom, fun	35
3. Not emotionally ready, too young, scared or insecure	55	3. Poverty, community pressure, transactional sex, abuse by sugar daddies, rape	14
4. Morality, beliefs that it is wrong, self respect	45	4. Hormones	12
5. Strict parents/fear of punishment, being in trouble, or getting caught	45	5. Love, to prove one's love, to feel closer to one's partner	11
6. Belief in 'no sex before marriage'	41	6. Problems at home, neglected by parents, lack of love at home	11
7. Good parental relationships, taught by parents, do not want to disappoint them	37	7. Pornography, family members engaging in sexual intercourse in front of you	9
8. Waiting for the 'right time' / 'right person', wanting it to be special	34	8. Rebelliousness	7

9.	Concerned about being judged, gaining a reputation, being labelled a 'slut' or 'whore'	10	9.	Loneliness, desperation, fear of being left by one's partner	3
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The most frequent motivation against engaging in sexual risk behaviour, as outlined by the above table, centres on fears of the possible consequences, such as contracting STDS, HIV/AIDS, or falling pregnant. In addition, this theme covers the responses that related to fear of death, of ruining one's life, having to leave school, and jeopardising one's future. Additional themes include those related to religion, values, culture, and morality, feeling too young, not emotionally ready and scared, as well as those relating to parental influences, either on the strictness sphere or the acceptance/involvement sphere. Finally, motivations against were also associated with a sense that sexual intercourse is special and should be treated appropriately, and an anxiety as regards judgement from their peers.

The most frequent motivation for engaging in HIV-related sexual risk behaviours was linked to pressure from peers and the media in terms of fitting in, being 'cool', proving that one is a 'real man', and peer competition. Further themes focused on experimentation, hormones (losing control), love, loneliness and fear of being left by one's partner, rebelliousness, and difficulties at home (including neglect by parents and a lack of love from them). Finally, there were themes associated with poverty, transactional sexual intercourse, rape, and having watched family members engaging in sexual intercourse in the home.

CONCLUSIONS

The presented analyses indicate that sexual risk behaviour is related to both parenting styles and SES. Further, both of the moderation models posed appear probable in this sample, while the mediation model was disproved for this group. Caregiver age, when controlled for, was found not to influence the models and was unrelated to both acceptance/involvement and sexual risk behaviour. Caregiver age was however, weakly correlated with supervision/strictness and SES, with older caregivers associated with both lower SES areas and greater supervision/strictness. Caregiver identity, while not affecting sexual risk behaviour, impacted levels of acceptance/involvement and supervision/strictness, with non-parent caregivers as lower on both

constructs. Demographic variables such as population group, parental education level, gender, and family structure seem to be related to both parenting style and sexual risk behaviour, and demonstrated differences in the presumed-likely direction for the most part. A significant relation was confirmed between sexual risk behaviour overall and the participants age of sexual debut and number of total sexual partners as expected. The QCA demonstrated a wide range of motivations for and against engaging in sexual risk behaviour; these motivations were anticipated by the literature and centred on fear of the consequences and religion as motivations against, and peer pressure and experimentation as motivations for engaging in sexual risk behaviour.

In summary, it can be seen that the main constructs are not only related but seem to interact in two possible moderation models, with SES – sexual risk behaviour moderated by parenting style **and** with parenting style – sexual risk behaviour moderated by SES. The mediation model is unlikely, and invalidated in the current sample. Additional factors that may affect parenting style include caregiver identity and age, and factors which affect both risk behaviour and parenting style include demographic variables such as population group, gender, and family structure.

CHAPTER FIVE: DISCUSSION

FINDINGS

Relationships were found between sexual risk behaviour and parenting style, as well as between sexual risk behaviour and SES. Further, ANOVAs showed differences across parenting style groups and SES in sexual risk behaviour, which confirmed the correlation result. Importantly, the tested moderation models were shown to be significant, indicating that both parenting style and SES act as moderators: that is, there is an SES – sexual risk behaviour relationship which is acted upon by parenting style, *and* there is a parenting style – sexual risk behaviour relationship which is affected according to SES level. These models remained significant after controlling for caregiver age.

The regression analyses revealed a non-significant model, and thus the possibility of this mediation model was refuted. The identity of the caregiver proved important in terms of parenting style, with parental caregivers displaying high acceptance/involvement and low supervision/strictness. In addition, older caregivers were seen to demonstrate higher levels of supervision/strictness and SES was inversely correlated with age of the caregiver. Finally, age of sexual debut and number of sexual partners were found not only to be correlated with each other but also with sexual risk behaviour, as predicted.

Differences existed across the demographic variables for the parenting style scores, and for sexual risk behaviour. Males appeared to report higher levels of sexual risk behaviour, and lower supervision/strictness than females. Differences in family structure demonstrated that families with two natural (not step) parents showed higher levels of acceptance/involvement and lower levels of supervision/strictness than step/single families or families living in other situations. In essence, this suggests that families with two natural parents display more *indulgence* than families not in that situation. In addition, two natural parent families demonstrated lower levels of sexual risk behaviour than single parent families. Higher levels of individual SES/parental education level were related to higher levels of acceptance/involvement and lower levels of supervision/strictness, again indicating potential greater use of the indulgent parenting style. Finally, population group was shown to differ significantly on both acceptance/involvement and supervision/strictness. Black participants appeared to report lower levels of acceptance/involvement than White participants and higher levels of supervision/strictness (greater *authoritarianism*) than White and other race participants. Notably, the effect size for this supervision/strictness significance was very strong, indicating that the practical differences across race groups in this construct are wide.

DISCUSSION

This section focuses on the value of the findings of the current study in terms of providing knowledge that may help to develop relevant, effective and sustainable sexual risk behaviour intervention programmes, as well as adding richness to the current fields of parenting style, and sexual risk behaviour research. The theory drive considers the applicability of Baumrind's model in this context, as well as the congruence of this study's findings with previously established outcomes. As such, the discussion will centre on exploring the results with a focus on their theoretical value, followed by a consideration of the way in which these findings inform intervention potential.

The discussion below focuses on the main findings of a relationship between sexual risk behaviour and both parenting styles and SES. Hereafter, the value of the moderation models is considered, as is the import of the absence of a found mediation relationship. The significance of the qualitative factors reported is then considered; however, as this finding was not central to the study, this discussion is brief. Family structure differences in parenting style are discussed with a focus on the notable incongruity with current research, followed by the significant findings related to gender and parental education level. This section ends with a consideration of the utility and theoretical value of the adapted instruments.

The relationship between parenting styles and sexual risk behaviour

The confirmation of the explanatory value of parenting styles in exploring sexual risk behaviour was an important result. This outcome goes partway to giving credence to the applicability of Baumrind's model in a South African context, as it ratifies the results of previous research utilising her model, in which parenting style was consistently found to be associated with sexual risk behaviour (Baumer & South, 2001; Bradley & Corwyn, 2002; Henrich et al., 2005; Santelli et al., 2000; Taris & Semin, 1998). This model is further validated through an exploration of the particular typologies and their relation to levels of sexual risk. This study demonstrated that authoritative and authoritarian styles were associated with the lowest levels of reported sexual risk behaviour, with indulgent and neglectful styles linking to the highest levels of HIV-related sexual risk taking behaviour.

These findings mirror in part those of Baumrind's and her colleagues, who have demonstrated that children and adolescents whose parents fall within the authoritative parenting style have been found to have the most positive outcomes across a range of constructs including levels of internal distress and problem behaviours (Bronstein et al., 1996; DeVore & Ginsburg, 2005; Weiss & Schwarz,

1996), and sexual risk-taking behaviours (DeVore & Ginsburg, 2005; Newman et al., 2008; Weiss & Schwarz, 1996). In addition, these findings echo those that report that children of neglectful parents have been found to have the worst outcomes and prognosis (see Dorius et al., Georgiou, 2008; Glasgow et al., 1997; Smetana, 1995; Steinberg et al., 1992; Steinberg et al., 1994; Suldo & Heubner, 2004; Weiss & Schwarz, 1996). However, children of indulgent or authoritarian parents have typically been found to have mixed outcomes that are nevertheless significantly worse than the children of authoritative parents (Dorius et al., Georgiou, 2008; Glasgow et al., 1997; Smetana, 1995; Steinberg et al., 1992; Steinberg et al., 1994; Suldo & Heubner, 2004; Weiss & Schwarz, 1996). This was not demonstrated in the current study, as the indulgent style was consistently linked to comparatively high levels of sexual risk behaviour, while the authoritarian style was associated with relatively positive outcomes across SES groups, and in the low SES context in particular. This discrepancy will be explored in further detail in the moderation section below.

In addition, the question of the applicability of this model across diverse groups, with specific reference to population group, is highlighted in the current study. There were differences by population group in both acceptance/involvement and supervision/strictness, with Black participants reporting lower levels of the former and higher of the latter. This would suggest an overall *authoritarian* style utilised by Black parents in this sample, as is suggested by previous research (Fite et al., 2009; McLoyd, Cauce, Takeuchi & Wilson, 2000). However, in the medium SES group, which comprised of 96.61% Black participants, the most commonly found parenting style was authoritative. This appears then to contradict the maxim that Black parents typically parent in an authoritarian manner, an assertion that again will be further explored in the moderation section.

This relationship finding is important theoretically as it demonstrates the utility of Baumrind's parenting style model in the South African context. Given the paucity of parenting style research in this context, the demonstrated apparent generalisability of this established model is useful as it allows for the potential growth of parenting research in South Africa. In addition, this study provides information as regards the utility of the model in a context which is more diverse across a range of variables than the original context in which the model was tested.

Further, this relationship finding provides some insight into one factor associated with adolescent sexual risk behaviour. This is helpful as sexual risk behaviour has been shown to be a multifaceted

construct: before intervention into this area can be fully conceptualised, there is a need for both a depth and breadth of understanding as regards contributing or linked factors.

The relationship between SES and sexual risk behaviour

The relationship between SES and sexual risk behaviour is also important to highlight. This finding is useful given the existing inconsistency and confusion around the issue of such a relationship. In particular, the current study adds research to the argument of a strong, negative correlation between SES and sexual risk behaviour; that is, low SES appears to be linked to higher rates of sexual risk behaviour. This relationship is important to emphasise here given the wide economic disparity in the South African context (Duncan, Bowman, Naidoo, Pillay & Roos, 2007).

An interesting note is the absence of a relationship found between individual SES/ combined parental education level and sexual risk behaviour. This is particularly notable given that the neighbourhood SES measured used primarily in the study was significantly and moderately correlated with sexual risk behaviour. There should perhaps be a question about the actual construct that each SES measure may be assessing, and a discussion around which more closely approximates socio-economic status, as well a consideration of why neighbourhood SES in contrast to individual SES would link more strongly to sexual risk behaviour.

SES (school), as discussed in previous sections, is based on national census data from the school catchment area, based on income, unemployment rate and literacy levels; in contrast, SES (individual) is based on adolescent-reported parental education level. One explanation for the seeming lower utility of the individual SES measure is that it is adolescent reported and may not be accurate, in contrast to the school SES which is based on census data. In addition, there is the possibility that, in South Africa, a measure of education perhaps does not liken to SES. This may be owing to high unemployment levels, estimated at 25.4% in 2007 (Statistics South Africa, 2009), that might preclude even the most skilled or educated from work, income, or resources, and thus a higher SES. As such, assessing parental education levels may only provide information about education level, which may not be related to SES in this context. This intimates that the use of

education level as an SES approximate in South Africa may be unhelpful and perhaps needs to be reconsidered.

This is a potentially useful addition to theoretical knowledge as it may go some way to explaining the plethora of inconsistent results in this context with regard to SES and sexual risk behaviour relationships. It may be that the utilisation of different measures of SES has contributed to this inconsistency; further research is required in order to assess whether the relationship between SES and sexual risk is measure-specific (specific to the measure of SES being used). A meta-analysis of SES – sexual risk studies exploring the existence of relationships and the SES measures used could be helpful in this regard.

Alternatively, neighbourhood SES could be simply a better predictor of sexual risk behaviour. Neighbourhood SES in the current study, as stated, comprises community-wide measures of income, unemployment levels, and literacy rates. While parental education level should in theory be similarly measuring income and literacy levels, these measures would be family specific and not reflective of the broader community context. The absence of a relationship between sexual risk behaviour and individual SES/parental education level may suggest that community socio-economic influences have a greater effect on sexual risk behaviours than do familial socio-economic factors. That is, broader external environmental factors may have a greater relationship to sexual risk taking behaviour than immediate familial influences, as these broad factors may affect the individuals (perhaps peers and role models) with whom one comes into contact, and may influence factors such as resource availability in the neighbourhood as well as education and work opportunities.

For example, community/neighbourhood SES is likely to determine, to some degree, access to resources such as condoms and STI treatment, alternative recreational activities, and prospects for future further education as well as employment opportunities (Nii-Amoo Dodoo et al., 2007; Patrick et al., 2010; Ramirez-Valles et al., 1998; Roche et al., 2005; Santelli et al., 2000). These factors, as discussed in previous chapters, have been found to contribute to levels of sexual risk behaviour and, indeed, several of these factors were highlighted in the qualitative questions asked, adding further empirical weight to their significance. As such, a broader focus onto the community and related community-determined factors that may contribute to individual outcomes seems a helpful step forward in future research into sexual risk behaviour and SES relationships.

The moderation relationships: SES and parenting styles interact

The value of the moderation models is a point to highlight. These models demonstrate two ways of conceptualising the relationships among these three constructs, and suggest that each of the constructs (parenting styles and SES) can act both as an explanatory variable and as a moderator. These models may provide valuable information in terms of clarifying areas of theoretical disjuncture, as below, as well as directing potential intervention, as seen in later sections.

As stated, the current study's proposed moderation models provide a useful mechanism through which an understanding of areas of theoretical controversy and disjuncture may be made easier; namely, the applicability of Baumrind's parenting styles to more diverse contexts/samples, as well as the way in which her model differed in this context.

While established literature suggests that authoritarian and indulgent parenting styles are commonly associated with mixed outcomes, this study demonstrated a clear pattern of authoritarian styles linked to more positive outcomes, and indulgent styles to poorer outcomes. However, the severity of these outcomes differed across SES contexts: for example, mean sexual risk behaviour scores for the indulgent parenting style ranged from 1.33 (high SES) to 10.0 (low SES), and scores for the authoritarian parenting style ranged from 0.6 (high SES) to 3.0 (low SES). As such, while the indulgent parenting style in high SES showed a relatively high level of sexual risk behaviour for that context, the authoritarian parenting style in low SES demonstrated a sexual risk behaviour mean score that was, although higher than the indulgent style in high SES, nevertheless the most positive outcome for its SES group. Had SES not been taken into consideration, these results may have seemed 'mixed' and been difficult to make sense of.

In terms of applicability too, the moderation models are helpful. This study corroborated findings of previous research that suggested that Black participants reported higher levels of supervision/strictness and lower levels of acceptance/involvement than other race groups, essentially demonstrating a more authoritarian parenting style. This information has been utilised in previous studies in support of the idea that Baumrind's parenting styles are thus questionable in their applicability across differing population groups as it has been suggested both that parenting style is determined by culture and/or ethnicity, and that authoritarian parenting styles as used by different population groups and/or cultures result in different outcomes (i.e. authoritarian parenting styles in Black parents have typically been linked to poor child outcomes while this same style in

Asian parents has been associated with positive child outcomes) (Dornbusch, Ritter, Liederman, Roberts, & Fraleigh, 1987; Fite et al., 2009; McLoyd et al., 2000).

The current study, however, demonstrates that these styles may not be wholly linked to ethnicity or culture. While the authoritarian parenting style was found to be the most frequent parenting style in the low SES group (which comprised 98.04% Black participants), the medium SES group (which consisted of 96.61% Black participants) displayed the authoritative parenting style as the most common. This suggests that parenting style differs quite radically *within* an individual racial group across different SES contexts. This may indicate that context accounts for some differences in parenting style as opposed, or in addition, to population group.

Further, the outcomes associated with different parenting styles appears similarly to be linked to context and less to population group. For example, in the low SES group, the authoritarian style is associated with the most comparatively positive outcomes. In the medium and high SES groups, the authoritarian style is associated with good outcomes but becomes less valuable, as the authoritative style links to the most positive outcomes. As such, it would appear that the value of the parenting style in terms of its associations to positive outcomes is highly dependent on context. This suggests that differences by context play a central role and that using SES/context as an elucidatory variable may provide an alternate explanation for differences that have previously been found across racial groups.

An exploration into the reasons surrounding the fact that the authoritarian parenting style is associated with the lowest levels of sexual risk behaviour in the low SES group would be an essential area for future research. The prevalence of this style in low SES areas recalls Kotchick and Forehand's (2002) report that low-income mothers, regardless of ethnicity, tend to show decreased warmth, affection, and communication. It highlights the emphasis that the psychosocial impact of poverty, unemployment and financial strain often result in disruptions to parenting (Kotchick & Forehand, 2002; Roche et al., 2005). Fewer resources in low SES areas to enable parents to cope with existing difficulties may decrease their capability to provide supportive and nurturing parenting (Baumer & South, 2001; Julian et al., 1994; Kotchick & Forehand, 2002).

However, the reason that this seeming disadvantage in low SES areas has been associated with less negative outcomes in the current study can only be surmised. At this point, it may be useful to consider the impact of culture on the SES-parenting style interaction. Rudy and Grusec (2006)

suggest that, in cultures such as South Africa where collectivism is a common way of life, authoritarian parenting may not be associated with negative parental emotions such as rejection, or lack of warmth. Research has shown that collectivist cultures that emphasise interdependence, obedience and deference to authority often do so as a normative practice and, as such, children do not experience it as harsh, or punishing. Indeed, it has been shown that an absence of such control can be experienced as rejection (Rudy & Grusec, 2006). This differs greatly in individualistic cultures in which authoritarian parenting is uncommon and frequently seen as rejection (Rudy & Grusec, 2006). As a result, as low parental warmth (acceptance/involvement) is the factor that distinguishes Baumrind's authoritarian from authoritative parenting style, what may be seen as authoritarian parenting in an individualistic context, would possibly be categorised as authoritative parenting in a collectivist culture owing to the absence of low responsiveness (Rudy & Grusec, 2006).

Ahuvia (2002) suggests that collectivism is common in low SES environments, and that as societies modernise and increase in SES, individualistic thinking becomes more prominent. This may imply a tendency toward more collectivism in the low SES group than in the higher SES groups, which may explain the finding that authoritarian parenting was associated with the most positive outcomes only in the low SES group. However, a deeper exploration of this and other cultural or additional factor explanations is beyond the scope and focus of the current study.

The absence of mediation

The absence of an effective mediation model may speak to the moderation nature of the relationships between the constructs, to additional different constructs that have yet to be examined, and/or to a cyclical relationship among the three constructs that does not follow a linear construction.

The findings demonstrate that SES is predictive of both sexual risk behaviour and parenting styles. While the SES – sexual risk behaviour link has been made in previous research questions in this study, the link between SES and parenting styles is interesting here. Explanations for this link centre on previously discussed connections, such as fewer resources in low SES areas to enable parents to cope with any existing problem behaviour or stress associated with parenting, which may decrease their capability to provide supportive and nurturing parenting, and the decreased ability of parents in low income areas to supervise effectively (Baumer & South, 2001; Julian et al., 1994; Kotchick & Forehand, 2002). In turn, parenting styles is too predictive of sexual risk behaviour. As such, it may

be difficult to clarify the nature of these relationships, as they do not appear to follow a clear organisational path.

Alternatively, additional factors such as peer and media pressure, or sensation-seeking/experimentation in adolescence may have to be examined in order to determine the pathway of relationships that result in sexual risk behaviour. This proposal is corroborated by the weak to moderate effect sizes for the main effects of parenting style and SES on sexual risk behaviour, as well as for the interaction of the two constructs. Small practical differences and limited proportions of the variance in sexual risk behaviour explained (as demonstrated by low r-square scores) suggest that, while these constructs may in part explain sexual risk taking behaviour, there are likely to be additional, alternate factors that would be useful in fully understanding the genesis and maintenance of sexual risk behaviour in South African adolescents. This finding is theoretically important as it provides a rationale for further research into this area.

Qualitative factors

The qualitative results aimed to discover a base list of alternate factors that may be linked to sexual risk behaviour to enable a foundation for future research in the South African context on this topic (Patrick et al., 2010). The primary motivations for engaging in sexual risk behaviour centred on peer and media pressure, proving one's manhood, experimentation, and factors related to poverty such as transactional intercourse, rape, or abuse by 'sugar daddies'. In addition, it was suggested that neglectful parents and lack of love at home may contribute to sexual risk taking. These results mimic those suggested by previous research done in this context (Patrick et al., 2010) and thus may highlight a possible trend of factors affecting adolescent sexual risk in South Africa.

The theoretical value of this information lies in its potential to inform further research in the area of sexual risk behaviour, as the finding of possible trends may direct and guide future inquiry. In addition, these results highlight the value of a focus on the effects of parenting style and SES when examining contributors to sexual risk behaviour: both of these factors appeared in the above findings, emphasising their significance as contributing factors.

Demographic findings

Family structure

An interesting demographic difference relates to the way in which family structure affects both parenting style and sexual risk behaviour. There is a plethora of research documenting the dangers of single parent homes in terms of negative outcomes [with specific reference to raised sexual risk behaviours] (Kotchick et al., 2001; Langille et al., 2003; Ramirez-Valles et al., 1998; Santelli et al., 2000; Thurman et al., 2006; Upchurch et al., 1999; Wight et al., 2005). This result was mimicked in the current study with single parent homes showing significantly greater levels of sexual risk behaviour than two biological parent homes. However, two biological parent families (in medium and high SES contexts) are also linked in the current study to indulgent parenting styles (higher levels of acceptance/involvement and lower levels of supervision/strictness). The indulgent parenting type is related to the second highest incidence of sexual risk behaviour in this sample, which suggests that the two natural parents' family structure in high and medium SES contexts should in fact linked to comparatively negative outcomes. However, this does not seem to be the case.

These incongruous results likely point to the influence of SES: the possible negative effects of the indulgent parenting style of two natural parents are mitigated by the beneficial effects of higher SES contexts. However, there is also the possibility that family structure may play an additional role over and above the SES effects. This theory requires investigation and, while beyond the scope of the current study, speaks to the need for a thorough exploration of the way in which family structure affects adolescent outcomes, the *mechanisms* through which this is achieved, and the way in which any negative influences can be mitigated as a helpful move forward.

Gender

The gender differences of higher levels of reported sexual risk behaviour as well as lower reported levels of supervision/strictness for males were expected given existing literature (Coyle, Kirby, Marín, Gómez & Gregorich, 2004; Eaton et al., 2003; Kroneman, Loeber & Hipwell, 2004). These findings are established and speak to multiple factors such as the roles of attributions, beliefs about likelihood of action occurring, and risk appraisal methods, as well as sex/gender socialisation methods used by parents (Fagot, 1978; Morrongiello & Rennie, 1998). There are likely numerous additional factors that may contribute to this finding but as this result does not form the focus of the current study, these cannot be discussed here in any detail.

Parental education level

The finding that higher levels of parental education were linked to higher levels of acceptance/involvement and lower levels of supervision/strictness (indulgent parenting style) is notable. This finding speaks to the established literature that suggests that parental education levels are linked with parental values: in particular, Alwin (1984), Kohn (1976), and Wright and Wright (1976) propose that higher levels of parental education are related to higher promotion of self-direction in one's child (in contrast to conformity and obedience). This means that these parents would espouse less supervision/strictness and encourage their children to be independent agents who are autonomous, self reliant, and self sufficient (Alwin, 1984; Kohn, 1976; Wright & Wright, 1976). An in-depth discussion here is beyond the scope of the study but interested readers can see the given seminal references and beyond.

The instrument utility

Finally, the utility of the developed and adapted measures (PSI and ASRBQ) is a useful point for discussion. The Adolescent Sexual Risk Behaviour Questionnaire (ASRBQ) is a self-developed measure that was adapted from the 'Practices regarding HIV practices' questionnaire (Howard, 2006). The questionnaire encapsulated common risk behaviours associated with increased HIV contraction risk, and appeared to display adequate face and construct validity. In addition, the reliability of the questionnaire was excellent, with a Cronbach coefficient alpha of .83. This information together suggests that the ASRBQ is a suitable measure that is useful and appropriate in the context of urban adolescents in South Africa across a range of socio-economic contexts. This use of this instrument should be replicated across similarly diverse contexts to ensure suitability and to corroborate reliability and validity findings.

The PSI used included both original items, some of which were reworded based on previous findings, and additional new items which were added in an attempt to increase the context-appropriateness of this USA-developed measure. The PSI utilised in this study consists of two constructs, responsiveness and demandingness, represented by the subscales of acceptance/involvement and supervision/strictness respectively. Factor analyses were conducted on the PSI in order to confirm that the items did indeed measure the proposed constructs, and a two factor model was highlighted. In this two factor model, the acceptance/involvement subscale included seven of the nine original

items, and excluded the two reworded items that had been problematic in a previous South African sample (see Methodology chapter).

The supervision/strictness subscale consisted of one original item and five of the newly added items. These items appeared to measure appropriately levels of parental supervision and strictness and may be capturing non-culture and non-context specific aspects of parental strictness (i.e. opposite sex relationship boundaries, levels/rates of chaperoning, 'curfew' boundaries on weekends, and self-report measures of adolescent perceptions about parental strictness). The excluded items from the original PSI referred to how late one is allowed to stay out on weekdays, and to how much parents try to and actually know about after school and evening activities. These items were found to be problematic in a previous South African sample (see Methodology chapter). The items chosen to remain in the PSI appear to have shown contextual appropriateness and face validity for the participants, as well as sound levels of reliability and construct validity. The model used in this study appears to be useful and suitable for use with urban South African adolescents across a range of SES contexts and differing age and gender groups. It would be helpful to continue to test this instrument in diverse contexts to assess its continued efficacy. In addition, the utility of this instrument in rural contexts is unknown and should be explored in further research with the aim of strengthening or adapting the current measure.

Overall, the theoretical utility of these instruments must be highlighted. Given the absence of both a parenting style instrument and a specific HIV-related sexual risk behaviour assessment measure developed for the South African context, these adapted instruments, shown to be valid and reliable in this context, have the potential for further use in advancing research in both the parenting and the sexual risk areas.

A final important note is the use of the PSI scoring in this sample. As in this researcher's previous experience, when deriving categorical parenting styles from the interval scores, the tertile split resulted in many parenting styles that remained unclassified (reclassified for the purpose of this study as 'Disorganised'). The prevalence of Disorganised types was approximately 50% which resulted in the need for a reclassification using a half split. This preponderance of an essentially unclassified parenting type presented a concern that perhaps the tertile split method for the PSI is too extreme in this context, and perhaps South African parenting styles are more moderate (falling

within the middle tertile). This may need to be explored further in order to determine the utility of the tertile split for South African samples.

The intervention value

The below section considers the value of the current study in terms of its utility in providing information that may aid in the development of sexual risk behaviour intervention programmes. This section follows a similar format to the theoretical discussion above, and considers the main findings of a relationship between sexual risk behaviour and both parenting style and SES. The value for intervention of a joint focus on SES and parenting styles is discussed in relation to the proposed moderation models. Finally, the import of caregiver age and identity for parent-focused programmes is taken into account, as is the significance of the qualitative factors.

The parenting styles – sexual risk relationship

The value of the establishment of a relationship between parenting styles and sexual risk behaviour allows for a possible way in which to direct the development of caregiver-focused intervention and prevention programmes aimed at reducing adolescent sexual risk taking behaviour. As this study has demonstrated, the authoritative parenting style across medium and high SES contexts and the authoritarian style in low SES contexts are associated with lower levels of sexual risk behaviour. As such, parenting practices that focus on high levels of supervision in all contexts, and high levels of parental involvement in medium and high SES contexts appear possibly to be beneficial. Parenting programmes that focus on fostering such practices may enable a reduction in adolescent sexual risk taking. However, it is important to replicate these results before intervention programmes are devised to ensure the reliability of such findings. In addition, it would be necessary to examine fully the relationship between sexual risk behaviour and authoritarian parenting in low SES contexts in order to understand the particular way in which these variables interact.

The SES – sexual risk relationship

The confirmation of a negative relationship between these two constructs in the current study guides intervention in its focus. It can be extrapolated that intervention that is focused solely on individual- and family-level variables contributing to sexual risk behaviour is insufficient as there

appear to be broader community-level factors that play an important role. These factors are further discussed below.

The value of the moderation models

A joint focus

It is difficult to argue for a central moderation model: both SES and parenting styles appear to act equally plausibly as explanatory and moderator IVs. For example, high SES is associated both with low sexual risk behaviour, and, interestingly, with indulgent parenting style. However, the indulgent parenting style is linked to higher sexual risk. Despite this fact, those individuals in high SES contexts with indulgent style parents maintain a lower level of sexual risk behaviour than those individuals in lower SES contexts with parenting styles such as authoritative or authoritarian, both of which are linked to lower sexual risk behaviour. Those with indulgent style parents in the high SES group do, however, display higher levels of sexual risk behaviour than their authoritative or authoritarian counterparts. This would suggest that SES has the primary influence on sexual risk but that it can be affected by parenting style. That said, an alternate explanation is that different parenting styles have differing effectiveness in different SES groups (SES as a moderator). The effects of indulgent parenting, while typically poor, can be seen to be 'protected against' or buffered by the high SES context. Similarly, the commonly positive effects of authoritative parenting are weakened/lowered in a low SES group as a result of context.

As such, this study argues for a focus on both SES and parenting style in intervention attempts that aim to enable and facilitate a reduction in adolescent HIV-related sexual risk behaviour. It can be seen that the authoritative parenting style is linked to the most positive outcomes (lowest sexual risk behaviour) in both the high and medium SES contexts; conversely, the most positive outcomes are associated with the authoritarian style in the low SES group. Should authoritative parenting programmes be implemented, this would result in a less desirable outcome in the low SES group, arguably the level at which intervention is most needed [owing to this level having the highest rates of sexual risk behaviour in the sample]. However, it can be seen that the lowest levels of sexual risk behaviour overall are linked to authoritative parenting in high SES groups. This appears to intimate that effective programmes to address high levels of sexual risk would need to address both parenting style and SES *in conjunction* in those areas where SES is low; that is, there would need to be micro-/mesosystem intervention as well as a macrosystemic focus in order to achieve effective and sustainable change.

It must be noted that intervention, while required in and perhaps focused on low SES contexts, should not ignore higher SES groups. The neglectful parenting style in the medium SES group resulted in poorer outcomes than any other high or medium SES group parenting style, and also demonstrated poorer outcomes than the authoritative or authoritarian parenting styles in the low SES group. This highlights the need for intervention to address poor parenting strategies across all contexts if adolescent HIV-related sexual risk behaviour is to be affected.

While direct intervention to alter SES contexts is very difficult, an exploration of the factors which comprise the neighbourhood SES measure in the current study may provide direction for potential intervention. As discussed, the neighbourhood SES measure includes income, unemployment, and literacy levels based on community-wide statistics. As such, intervention that targets SES would need to address these issues. Community interventions such as job centres, community centres, reading groups, entrepreneurial workshops and the like may be useful intervention points. In addition, advocacy for greater access to resources and basic necessities such as adequate housing, tax breaks for companies that support low income individuals in job creation or small, medium, and micro enterprise (SMME) development as well as government lobby perhaps for greater social welfarism, a focus on adult education, and a commitment to legislature that promotes income equality and poverty reduction could be helpful starting points (Duncan et al., 2007). However, it must be noted that these interventions would likely be long-term, macro-level projects that would need to be ongoing and would not be as feasible, practical, and efficient to implement as parenting style workshops would be: however, such community projects would be likely to enable the sustainability and enhance the effectiveness of the parenting classes.

Caregiver age and identity

Useful intervention should focus on both parent and non-parent caregivers. This study's results demonstrate that parent caregivers display more acceptance/involvement and less supervision/strictness consistently across population and SES groups in comparison to non-parent caregivers. This may be because those non-parent caregivers who are not looking after their own children (i.e. aunts/uncles, guardians, grandparents, siblings and the like) may feel resentful, overwhelmed, and perhaps may have their own children to look after and care for in addition (Strozier, McGrew, Krisman & Smith, 2005); in this way, these caregivers may be unable to be as involved or accepting as parent caregivers. Attending programmes that are focused on growing the

ability of parents to parent in an authoritative parenting style, which aims to enhance levels of both acceptance/involvement and supervision/strictness, may enable better future outcomes for children of all caregivers.

In addition, as the found effects of parenting style and SES on sexual risk behaviour were shown to hold irrespective of caregiver age, it could be surmised that these interventions may feasibly focus on caregivers of all age. While older caregivers were shown to display greater levels of supervision/strictness than their younger counterparts, this may possibly be owing to the fact that older caregivers were also linked to low SES contexts [expected given the high rates of grandparent caregivers in such contexts (Amoateng, et al., 2004; Cox et al., 2004)]. Low SES contexts have been shown to be linked with higher levels of supervision/strictness (Davis et al., 2001; Radziszewska, Richardson, Dent & Flay, 1996), which may mean that the link between caregiver age and supervision/strictness is explicable by the SES links. While further research into this area may be useful in order to determine the exact influence of caregiver age on parenting practices, as the current study demonstrated that the existence of parenting effects holds notwithstanding caregiver age, it seems possible to hypothesise that intervention with caregivers should be similarly focused regardless of age.

Qualitative factors

In addition to attempting to provide a base list of alternate factors that may be linked to sexual risk behaviour in order to inform future research, the qualitative questions were asked in the hope that factors not commonly found, discussed or emphasized in middle class Western samples may be mentioned, which would greatly aid in the formation of *context-specific* programmes to reduce sexual risk behaviour in South Africa.

While many of the provided motivations for and against engaging in sexual risk behaviour appeared to speak to commonly found constructs, those that centred on poverty, community pressure, seeing family members engaging in sexual intercourse, transactional sex, and abuse by ‘sugar daddies’ were factors that seem to be, if not specific to this context, rare in the bulk of existing literature sampling Western middle class samples. These factors may all be grouped and linked as factors related to low SES: as previously discussed, the generally small, overcrowded housing situation experienced by many in low SES areas, in which there may be children sharing rooms with their parents, contributes to a potential lack of sexual privacy, which allows children to view adult sexual behaviour and

perhaps stirs curiosity and a desire to emulate such behaviour (Pretorius et al., 1999; Nii-Amoo Dodoo et al., 2007). In addition, transactional sex is a behaviour that occurs commonly in contexts where there exists high levels of unemployment and poverty; these two factors result in financial stress and often, families and individuals lack basic necessities such as food, shelter and clothing (Tladi, 2006; Wojcicki, 2005). As a consequence, some adolescents feel obligated to engage in behaviours that would not be considered under different economic circumstances, as a means to generate income for these basic necessities (Eaton et al., 2003; Nii-Amoo Dodoo, 2007; Patrick et al., 2010; Seeley et al., 1994; Tladi, 2006; Wojcicki, 2005). Finally, the idea of community pressure speaks to both a cultural ideal related to gender roles and the importance of girls becoming women and boys becoming men, as well as possibly to the need for increased income in such communities prompting pressure to fall pregnant/become HIV positive in order to obtain state-funded childcare or disability grants (Tladi, 2006). These factors and their link to low SES highlights the need for intervention at an SES level, as discussed above. Altering parenting styles only will not achieve change in these areas, and the prominence of these as given motivations stresses their significance as contributing factors to engaging in sexual risk behaviour.

In addition, there were motivations both for and against sexual risk behaviour that reflected the importance of parenting practices. The participants suggested that involved and loving parents who were strict and with whom they had good relationships contributed to avoiding sexual risk behaviours. This again underscores the value of the current study's focus and reflects the study's findings of the usefulness of the authoritative parenting style. It suggests that interventions targeting this construct may be helpful in combating adolescent sexual risk behaviour.

Finally, these findings demonstrated the importance of examining the impact of religion, gender roles (wanting to be a 'man' as well as not to be labelled a 'whore'), the role of the media, and the nature of beliefs and attributions in adolescent relationships when designing interventions to target sexual risk behaviour. These factors would need to be considered should a holistic intervention be desired.

Summary

The current study will, it seems, be able to add helpfully to the existing literature base in terms of sexual risk behaviour, parenting styles and SES research, with particular focus on the way in which

these constructs interact through the proposed moderation models. In addition, the study adds theoretical value with the validity and potential for further use of the adapted instruments. The study also contributes to knowledge that may be utilised in guiding and developing effective, relevant, and sustainable adolescent sexual risk behaviour intervention strategies in the South African context.

However, as posed questions are answered, new questions are raised in an attempt to understand these mechanisms and potential additional factors in greater depth. As such, this study presents a hopeful starting point for future exploration, with greater research in this field within the South African context called for, to form more conclusive ideas and either to corroborate the current results or to provide an alternate/additional understanding of these or other constructs and their relational patterns. As discussed in previous parenting style work in South Africa, it is further important to examine other 'established' findings from parenting style studies conducted in North America, South America and Europe and determine whether they are valid and applicable within a South African context. Once these patterns have been drawn, it will become easier to develop efficacious intervention toward enhancing positive outcomes.

CHAPTER SIX: CONCLUSIONS, LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

CONCLUSION

The current study has provided confirmatory results that have allowed for the substantiation of Baumrind and colleagues' results in this context; that is, this study has demonstrated that sexual risk behaviour is indeed related to and explained in part by parenting styles. In addition, the study has provided conclusive results about the existence of an SES – sexual risk behaviour relationship to add to the controversial literature base on this topic. This relationship, however, links only to neighbourhood SES and not to individual (based on parental education levels), a finding which may be explained through questioning the utility of parental education as an SES measure in the South African context, or through examining the way in which broader community factors affect adolescents (wider focus that does not simply explore familial factors).

In addition, the study has proved two useful moderation models through which to explain the SES and parenting style influences on sexual risk behaviour. These models are able to provide both practice-related and theory-oriented insight. In terms of intervention strategies, these models highlight the need for simultaneous intervention into both SES and parenting style in order to effect change: the moderation models suggest that intervention at one level may be beneficial but will ultimately be hampered or enhanced by the non-intervention factor. As such, harnessing the positive aspects of authoritative parenting styles as an individual/relational factor may enhance the success of interventions aimed at poverty reduction, alleviation or eradication; similarly, addressing poverty can only bolster the effects of parenting programmes.

In terms of theoretically-driven insight, the moderation models provide one way in which to understand the established differences in population groups in terms of parenting style. In the current study, it has been hypothesised that race/ethnicity and SES conflation in previous literature has resulted in socio-economic context differences being seen as racialised. The incorporation of SES here and the exploration of the way in which SES may affect parenting styles has enabled a deeper understanding of these population group – parenting style relationships. In addition, the moderation models may enhance an understanding of previously mixed outcomes for authoritarian and indulgent parenting through the addition of context/SES.

Alternate factors that may affect sexual risk behaviour that were drawn from the qualitative section of the study were briefly considered. This base list of alternate factors aimed to provide both aid in the formation of *context-specific* programmes to reduce sexual risk behaviour in South Africa, as well as knowledge toward a foundational base for future research in the South African context on this topic.

The study considered the impact of both caregiver identity (as parent or non-parent) and caregiver age on intervention strategies. This is particularly important in the South African context given the growing frequency of non-parental caregivers owing to the higher incidence of working mothers due to economic difficulties (Patel, Govender, Patuk & Ramgoon, 2006), frequency of caregiver death due to HIV/AIDS and related illness [with AIDS as the cause of 71% of deaths in the 15-49 age group (Patrick et al., 2010)] and increasing urbanization which often results in children being left with grandparents or extended family members (Amoateng et al., 2004; Cox et al., 2004). It is further important in the global context of rising divorce rates, single parenting, and reconstituted families (Pinsof, 2002) in which the nuclear family is becoming increasingly rare.

Further, differences were demonstrated in parenting style and/or sexual risk behaviour for several demographic variables: the gender and parental education level results conformed to current literature, while the family structure findings appeared incongruous in comparison to those suggested by previous existing research, and could not be considered outside of the influence of SES. Explanations for these relationships were put forward only briefly as they exist beyond the scope of the current study; however, it is proposed that the way in which, in differing SES contexts, these variables may affect parenting style and, as a result, adolescent outcomes such as sexual risk behaviour, be explored in future study.

Finally, the study has demonstrated the suitability and utility of both the adapted PSI and the developed ASRBQ with adolescents in the South African urban context. This is particularly notable as there currently exists no parenting style measure that is appropriate to and used within this context. The efficacy of these measures speaks to the possibility for future research into the areas of sexual risk behaviour and parenting styles with reliable and valid instruments, and, as such, this study calls for further assessment of their suitability in order to ascertain their true value across different

contexts, with a particular focus on use in rural areas and with ethnically and culturally heterogeneous samples.

LIMITATIONS

The primary limitation in this study may be related to the differing sample sizes across SES groups, which made comparison difficult at times. The low SES sample consisted of only 51 participants, in comparison to the 118 participants in the medium group and 197 in the high SES sample. Low SES schools were approached repeatedly and approximately 250 questionnaires were given out at these institutions; however, response rates were poor. This difficulty, while a clear limitation, could not have been easily avoided given the time and ethical constraints on the study.

In addition, sampling from low SES areas may remain problematic in future studies as schools in these areas are difficult to contact owing to a lack of resources (email, website, receptionist to answer the telephone, and so on). Further, teachers and principals in these schools are frequently more burnt-out, understaffed and under-resourced than in other areas; as such, consent for participation is difficult to obtain, and maintain (Pretorius, 2008).

A second limitation relates to the need for parental consent in order for the adolescent to partake in the study. While this is an obligatory ethical requirement, it means that neglectful parents may be underrepresented, as these parents, by their very style, are unlikely to sign a consent form. As such, the prevalence and effect of this parenting style, commonly associated with the most negative outcomes for adolescents, is difficult to ascertain, assess, and change. The use of adolescent self-consent, and not simply assent, would be beneficial in parenting style studies in order to capture these factors of the neglectful parenting style and enable real change. However, it must be acknowledged that this method would present an ethical difficulty, and should be carefully considered.

Third, the relative homogeneity in family structure and caregiver identity may reflect poorly on the external validity of the study. This is especially relevant as both of the PSI subscale scores differed significantly by both family structure and caregiver identity, and a question may be posed as to whether different results may have been obtained had there been a more heterogeneous sample. The grouping of non-parental caregivers, and of step- and other situation families respectively aimed

to decrease the sample size gap. However, as above with the low SES sample size, little more could be done to alter this limitation, given the time constraints.

A fourth limitation is related to the inherent difficulties in studying sexual risk behaviour. As measurement of this behaviour type relies on self report, there may be inevitable biases such as social desirability bias (Leigh & Stall, 1993). It has been suggested that participants tend to under-report risky sexual behaviours as a result of the desire to portray themselves favourably (Leigh & Stall, 1993). As such, the study's data could perhaps not be wholly reliable or accurate reports of sexual risk behaviour frequency. However, as there are currently no alternate methods than self-report to measure sexual risk behaviour, this limitation could not have been avoided.

In addition, limitations inherent to exploring sexual risk behaviours include the possibility of volunteer bias: Machover Reinisch, Sanders and Ziemba -Davis (1988) suggest that "[p]eople may hesitate to volunteer for studies of sexual behavior and AIDS risk for a variety of reasons [including]...loss of social prestige...denial (perhaps even to themselves) of their sexual experiences; desire to avoid painful memories; a lack of sexual experience..." (p924). This may mean that those who participate in the study represent a particular subset or type of individuals, which may reflect poorly on the external validity of the study (Rosnow & Rosenthal, 1991). However, this limitation is difficult to avoid given the time and ethical constraints attached to random sampling methods.

The absence of a measure or question to determine cultural affiliation meant that this variable was absent from the study despite its clear relevance in previous literature. It can be seen that in the current study, all of the participants attended school in an urban context and appeared to express similar while not identical views around sexual risk behaviour. This suggests that there may have been a shared culture across the participants to some degree. However, the incorporation of culture as a variable in future research is proposed.

Finally, the absence of a measure or question to determine religious affiliation meant that this variable too was absent from the study despite its relevance both in previous literature and reiterated in the current study. This variable's exclusion was based on it not having been chosen as a focus of the study owing to time and scope constraints; however, it must be noted that its' absence compromises the ability to develop of a holistic model of the influences on sexual risk behaviour.

DIRECTIONS FOR FUTURE RESEARCH

Future research suggestions from the current study are discussed below. These suggestions focus on replicating this study's findings, especially within diverse contexts. In addition, research addressing the incongruities found here would be useful, as would studies expanding the focus on factors that may contribute to adolescent sexual risk behaviour. Finally, research that validates or adapts the instruments used in the current study would be helpful.

Research that attempts to corroborate or disprove the current findings would be beneficial: as parenting style research is a relatively new field in the South African context, research that aims to test the established outcomes that exist in other contexts around the effects of parenting styles is needed. These outcomes may diverge from sexual risk behaviour: the existing literature on parenting style relationships in international contexts spans several areas, such as self esteem, competence, psychological functioning, achievement, and substance abuse, and as such, provides a rich area for future research. However, it is suggested that research into the field of sexual risk behaviour continues to remain a focus given its significance and relevance in this context. In addition, tests of the proposed moderation models in different contexts are suggested in order to ascertain their utility and applicability.

Additionally, studies that explore the way in which demographic variables such as family structure, caregiver identity, and parental education level affect the constructs of parenting, SES, and sexual risk behaviour are suggested. This exploration would allow for more thorough knowledge as to the effects of these variables and their importance in contributing to adolescent outcomes. In particular, establishing general trends would enable an intervention target group to emerge.

An investigation of the mechanisms behind the incongruous findings in the current study would facilitate deeper understanding. For example, a consideration of why the authoritarian parenting style is associated with the lowest levels of sexual risk behaviour in the low SES group would be an essential area for future research. Such studies may enable more effective intervention programme development as well as contribute to the clarification of potential theoretical confusion.

Further exploration of SES measures in the South African context would be useful, with specific emphasis on the utility of parental education level as a measure of SES, and potential replacement measures that could be more accurate and appropriate. In addition, a clear differentiation between

individual and community socio-economic factors, their measures, and their differing influence on individual outcomes would be helpful. These studies would, as above, contribute to both intervention and theoretical knowledge bases.

Future research in this area would also benefit from an exploration of additional factors that may affect sexual risk behaviour, and their interaction with the proposed moderation models. Gaining a holistic and comprehensive understanding of the factors which are implicated in the genesis and maintenance of such behaviours allows for similarly comprehensive and holistic intervention strategies, which may facilitate the reduction of HIV-related sexual risk behaviour in South African adolescents.

Finally, testing the utility of both the adapted PSI and the developed ASRBQ would be worthwhile in assessing the value of these measures in additional samples. The development of a valid and appropriate parenting style measure has been highlighted by this researcher previously as important in this context, as it would allow for unclouded exploration of the influence of parenting style on a multitude of adolescent outcomes. In addition, the existence of a valid sexual risk behaviour measure facilitates future inquiry into this field. As such, clarifying and confirming the merit of both of these instruments may aid in such research.

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APPENDICES

Appendix A1

The participant information sheet: English



School of Human and Community Development

Private Bag 3, Wits 2050, Johannesburg, South Africa

My name is Alex Westcott, and I am conducting research to obtain a Masters degree in Community-based Counselling Psychology at the University of the Witwatersrand. I am focusing on adolescent sexual risk behaviour and its relationship to both parenting style and socio-economic status.

We live in a society where characteristics such as our age, race and gender have an impact on the experiences we have; as a result, part of this research aims to explore how, if at all, these may influence the above relationship. I would like to invite your child/dependent to participate in this study.

If the learner chooses to participate in the study, his/her parents will need to complete and sign the attached informed consent form. Once this signed consent form has been returned to the researcher, the learner will receive a questionnaire, which will take approximately 10 minutes to complete.

No-one, apart from the researcher and the research supervisor, will have access to these questionnaires and all information on the questionnaire will be kept entirely confidential. In order to aid this process, the learner will return his/her questionnaire in a sealed envelope. Further, the questionnaire asks for no identifying information and, as such, is completely anonymous.

Participation is voluntary, and no student will be advantaged or disadvantaged in any way for choosing to complete or not complete the questionnaire. The completed questionnaire will not be seen by any other person at any time, and will only be processed by myself. The learner may withdraw his/her data at any time during the collection process.

Once the study has been completed, should the learner or the parent require a copy of the research results, they are welcome to email the researcher at awestcott87@gmail.com with the subject line "Research results". Feedback will then be emailed. No individual feedback will be available, however, as responses are anonymous. Should the learner experience any distress as a result of any of the questions asked, and feel that he/she would benefit by talking to a counsellor, please contact the school guidance counsellor or call Lifeline on (011) 728 1347, Childline on 08000 55555 or (011) 645 2000, FAMSA on (011) 975 7107 or The Central Gauteng Mental Health Society on (011) 614 9890.

Participation in this study would be greatly appreciated. This research will contribute both to a larger body of knowledge on parenting styles, as well as to knowledge on specific practices which may aid in the reduction of sexual risk taking. This can help to inform potential parenting training workshops and the like.

Kind Regards

Alex Westcott

Contact details:

Researcher: **Alex Westcott**

Call: 083 530 4310

Email: awestcott87@gmail.com

Supervisor: **Jarrod Payne**

Call: (011) 717 4497

Email: jarrod.payne@wits.ac.za

Appendix A2

The participant information sheet: Setswana



School of Human and Community Development

Private Bag 3, Wits 2050, Johannesburg, South Africa

Lebitso laka ke Alexandra Westcott kedira dipatlisoso gore ke bone dithuto tsa maemo a akogodimo agodirisana le leditshekatshoko tsamaemo athlaloganyo mobaagisaneng bame ko University ya Witwatersrand. Se a setlile golebagana le maemo a akotsi a thobalano mobatsheng lemokgwa wayone magareng gabatsadi mamaemo akogodimo le kotlase.

Rephela modingwageng tseo mogotsone, bophelo bolaulwang ke gore a omotho wamosadi kgotsa a omotho wantate; ebile legore a onale maitemogelo. Dipatlisoso tse ditlile golebana legothlagisa gore ase kennete; legore, gaelegoregone tota gojalo, gore bophelo bolaula keone maemo areabuileng a. Ketlarata golaletsa bana balona, kapawena motsadi, gotsaya karolo mo thuthong e.

Ge moithuti adumalana gotsaya karolo, motsadi wagage otlathwanele kegotlatsa foromo e Gemaleba. Ge foromo esetse etladitswe, ebile ebowetse mo mosekasiki, moithuti otlala amogela lethlare ladipotso. Letlile gotsaya selekano semetsotso eleshome gofetsa.

Gagona ope ntle le mosekasiki kgotsa motlatsi wagage otlannang le tshono yakoga bona , molethlareng le; mme sesekwetseng mogosona setlatsewa jalo ka khupamarama. Gonetefatsa seo, moithuti omongwe le omongwe otlala bona jalo lethlare la dipotso mo pakaneng etswaletsweng, ebile gagothlokege gore ongwale lebitso lagagwe; yakaseo ele sephiri.

Gotsaya karolo waithaupa, ebile gagona moithuti omongwe yotla tselwang jalo kogodimo, kgotsa kwatlase, gore a ofeditse, kampo gawafetsa. Okaikogogela morago nako engwe le engwe geobatlala, pele ga otsamaisa lethlare lagago.

Ge obatlala Kgatiso ya lethlare lagago otlala tshwana kego dirisa email address ya awestcott87@gmail.com kasethlogo sesereng "research results", mme otlabona ditlamorago mo

email-ing. Gankitla mabontshiwa ditlamorago, dibonwe bongwe kabongwe, mme gotlabontshiwa ditlamogaro tsabatsei ya karolo bothle. gethotsa karolo obone dingwe tsa dipotso dimo tsenya momaikutlong a asamosiameleng, akabona mo counsellor, kago leletsa dinomoro tse latelang; Life line (011) 728 1347 kapa Childline mo 08000 55555 kapa (011) 645 2000, kapa FAMSA mo (011) 975 7105, kgotsa, The Control Gauteng Mental Health Society mo (011) 614 9890.

Gotsaya karolo mo, gotlailumedisisa tota. Dithuto tse, ditlatsaya karolo mo, batseng lemogo ba o babatlang maitemogelo agoba batsadi, lemo gobo neng maitemogelo amaleba, lego ikatisetsa molewa osiameng wa thobalano. Se seka thusa gokafa baetlabang batsadi maitemogelo lebokgoni.

Ke a leboga

Alexandra Westcott

Contact details:

Researcher: **Alex Westcott**

Call: 083 530 4310

Email: awestcott87@gmail.com

Supervisor: **Jarrold Payne**

Call: (011) 717 4497

Email: jarrod.payne@wits.ac.za

Appendix B

The parental informed consent form

Should you be willing to allow your child/ dependant to take part in this research study after reading the information stated above in the participant information sheet, please complete the following:

I, (full name) _____ do hereby give my consent for my child/dependant to take part in the above mentioned research.

I understand that this is voluntary, and that he/she will not be advantaged or disadvantaged in any way by participating in this research. I understand that he/she can withdraw his/her data at any time during the collection process.

Further, I understand that all of his/her responses will be anonymous and that his/her confidentiality will be protected. I recognise that at no point during or after the study will the researcher have access to his/her identity.

Signed: _____

Date: _____

Appendix C

The Demographic information sheet

Please answer the following questions by ticking the box most appropriate to you. Please do note that these questions are asked purely for statistical purposes and are not meant to offend in any way.

Gender:

Male	Female
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Age: _____

Population Group:

White	Black	Indian	Coloured	Asian
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Other (please specify): _____

Parental Education level (mother):

Not a high school graduate	A high school graduate	Technical/ business/ trade school	Some university	Bachelor degree	Postgraduate degree	Unsure
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Parental Education level (father):

Not a high school graduate	A high school graduate	Technical/ business/ trade school	Some university	Bachelor degree	Postgraduate degree	Unsure
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Family unit type:

Living with two biological parents	Living with one parent	Living with one parent and one step-parent	Living in another situation
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If living in another situation, please specify (i.e. child-headed, grandparents looking after you etc.):

Who is your primary parent/guardian/caregiver? (e.g. mom, dad, aunt, gran, brother etc.)

How old is your primary parent/guardian/caregiver as listed above?

Appendix D

The Parenting Style Index

Please answer all the questions about the parents (or guardians) you live with. If you spend time in more than one home, answer the questions about the parents (or guardians) who have the most say over your daily life. If you live alone, with a partner or with friends, please answer the questions about the time when you lived with your parents/guardians.

If you STRONGLY AGREE with the statement, circle the 4.

If you AGREE SOMEWHAT with the statement, circle the 3.

If you DISAGREE SOMEWHAT with the statement, circle the 2.

If you STRONGLY DISAGREE with the statement, circle the 1.

1. I can count on my parents to help me out, if I have some kind of problem	1	2	3	4
2. My parents encourage me to do the best I can in whatever I do.	1	2	3	4
3. My parents encourage/allow me to think independently.	1	2	3	4
4. My parents help me with my work if there is something I don't understand.	1	2	3	4
5. When my parents want me to do something, they explain why.	1	2	3	4
6. When I get a bad mark in school, my parents encourage me to try harder.	1	2	3	4
7. My parents know who my friends are.	1	2	3	4
8. My parents spend time just talking with me.	1	2	3	4
9. My family does things for fun together.	1	2	3	4
10. When I go out at night, my parents insist on taking me, either driving or on public transport	1	2	3	4
11. When I go out at night, my parents allow a friend/sibling/parent of a friend to take me	1	2	3	4
12. When I go out at night, my parents allow me to go on my own	1	2	3	4

13. When I go out on Saturday or Sunday during the day, my parents insist on taking me, either driving or on public transport	1	2	3	4
14. When I go out on Saturday or Sunday during the day, my parents allow a friend/sibling/parent of a friend to take me	1	2	3	4
15. When I go out on Saturday or Sunday during the day, my parents allow me to go on my own	1	2	3	4
16. I have to tell my parents (SMS/phonecall) when I arrive at and leave a venue (party/movies/a friend's house) if they don't take me there	1	2	3	4
17. My parents allow me to have members of the opposite sex at my house when they're not there	1	2	3	4
18. My parents allow me to go to parties/friends' houses where there are no other parents there	1	2	3	4
19. My parents allow me to go to parties where they don't know the parents who are there	1	2	3	4

20. Please rate how strict you feel your parents/guardians are on the scale below where 1 means not strict at all and 4 means very strict

1 2 3 4

21. In a typical week, what is the latest you can stay out on

SCHOOL NIGHTS (Monday-Thursday)?

I am not allowed out ____
before 8:00 ____
8:00 to 8:59 ____
9:00 to 9:59 ____
10:00 to 10:59 ____
11:00 or later ____
as late as I want ____

22. In a typical week, what is the latest you can stay out on

FRIDAY OR SATURDAY NIGHT?

I am not allowed out ____
before 8:00 ____
8:00 to 8:59 ____
9:00 to 9:59 ____
10:00 to 10:59 ____
11:00 or later ____

as late as I want _____

23. How much do your parents TRY to know:

	Don't try	Try a little	Try a lot
Where you go at night?	_____	_____	_____
What you do with your free time?	_____	_____	_____
Where you are most afternoons after school?	_____	_____	_____

24. How much do your parents REALLY know:

	Don't know	Know a little	Know a lot
Where you go at night?	_____	_____	_____
What you do with your free time?	_____	_____	_____
Where you are most afternoons after school?	_____	_____	_____

Appendix E

The Adolescent Sexual Risk Behaviour Questionnaire

Please remember that there is no obligation to complete these items: you do not have to answer any questions that make you feel uncomfortable in any way.

The term 'sexually active' refers to having ever engaged in sexual intercourse, currently or in the past.

- Are you sexually active? (please circle) YES / NO

IF YOU ANSWERED 'NO' TO THE ABOVE QUESTION, PLEASE ONLY ANSWER QUESTIONS (3), (8) and (9) AND THEN STOP.

IF YOU ANSWERED 'YES' TO THE ABOVE QUESTION, PLEASE ANSWER ALL THE FOLLOWING QUESTIONS.

Please circle the number that you feel best corresponds to how you feel. The options range from 1 (NEVER) to 7 (ALWAYS).

1. I have (in the past or currently) more than one sexual partner at a time	1 2 3 4 5 6 7
2. I contract (in the past or currently) sexually-transmitted infections/diseases (STI/STD)	1 2 3 4 5 6 7
3. My (current or previous) partner and I use a condom when we have oral sexual intercourse [OR Tick here if you do not practice oral sexual intercourse ____]	1 2 3 4 5 6 7
4. My (current or previous) partner and I use a condom when we have vaginal sexual intercourse [OR Tick here if you do not practice vaginal sexual intercourse ____]	1 2 3 4 5 6 7
5. My (current or previous) partner use a condom when we have anal sexual intercourse [OR Tick here if you do not practice anal sexual intercourse ____]	1 2 3 4 5 6 7

6. At what age (in years) did you first have sexual intercourse? _____

7. How many sexual partners (in total) have you had up until now? _____

Appendix F

The participant information sheet : pilot study



School of Human and Community Development

Private Bag 3, Wits 2050, Johannesburg, South Africa

My name is Alex Westcott, and I am conducting research for the purposes of obtaining a Masters degree in Community-based Counselling Psychology at the University of the Witwatersrand. My area of focus is that of adolescent sexual risk behaviour and its relationship to both parenting style and socio-economic status.

I am currently piloting two adapted questionnaires to determine the acceptability of the new and adapted items. I would like to invite you to participate in this pilot study.

If you choose to participate in the study, please complete this questionnaire as carefully and honestly as possible. It will take approximately 10 minutes to complete. Once you have answered the questions, you can return the questionnaire to the researcher. Please note that no one else will have access to the completed questionnaires apart from the researcher and the research supervisor, and confidentiality is guaranteed. If you do return your questionnaire, this will be considered your consent to participate in the study.

Participation is voluntary, and no student will be advantaged or disadvantaged in any way for choosing to complete or not complete the questionnaire. Your completed questionnaire will not be seen by any other person at any time, and will only be processed by myself. You may withdraw your data at any time during the collection process. Further, the questionnaire asks for no identifying information and, as such, is completely anonymous.

In addition, the data that emerges from this pilot study will only be used to inform the adaptation, if necessary, of the two piloted questionnaires and will not form part of the main study.

Once the study has been completed, should you require a copy of the research results, you are welcome to email the researcher at awestcott87@gmail.com with the subject line "Research results". Feedback will then be emailed to you. No individual feedback will be available, however, as responses are anonymous.

Your participation in this study would be greatly appreciated. The research that this pilot is in aid of will contribute both to a larger body of knowledge on parenting styles, as well as to knowledge on specific practices which may aid in the reduction of sexual risk taking. This can help to inform potential parenting training workshops and the like.

Kind Regards

Alex Westcott

Contact details:

Researcher: **Alex Westcott**

Call: 083 530 4310

Email: awestcott87@gmail.com

Supervisor: **Jarrold Payne**

Call: (011) 717 4497

Email: jarrod.payne@wits.ac.za

Appendix G

Request for participation letter and informed consent form



School of Human and Community Development

Private Bag 3, Wits 2050, Johannesburg, South Africa

Postgraduate research – request for participation

To _____

Principal

My name is Alexandra Westcott, and I am conducting research for the purposes of obtaining a Masters degree in Community-based Counselling Psychology at the University of the Witwatersrand. My area of focus is that of parenting styles and their relationship to socio-economic status and sexual risk taking behaviour.

I am looking to collect questionnaire data from students at the beginning of the second term (June), and would like to request access to the Grade 10 and 11 students in your school.

I will need roughly five to ten minutes of time in which to address the students. This may be at any suitable time - I am amenable to whichever suits yourself and the relevant teachers best. I would need this time to explain my research, and would ask those willing to participate to stay behind after the class/assembly so that I may distribute parental consent forms. I aim to return the following day and distribute questionnaires to those who are willing and have signed parental consent forms. If the school is amenable, I will return on one other occasion for the students who would like to participate but did not have signed consent forms on the original day. The questionnaire takes approximately 10 minutes to complete. It is ideal for the students with signed forms to complete it immediately at the venue if possible, and return it to me in a sealed envelope immediately thereafter. All of this information will be explained to students who choose to participate. At no time do I wish to disrupt any classes or the learning process.

The questionnaires require no identifying information and, as such, results in the students' data remaining anonymous. I would like to make clear that all of the data will be kept in a secure location, accessible only by me, and my supervisor. Please note that confidentiality is guaranteed.

Kind Regards

Alexandra Westcott

Contact Details:

Researcher: Alex Westcott	083 530 4310	awestcott87@gmail.com
Supervisor: Jarrod Payne	(011) 717 4497	Jarrod.Payne@wits.ac.za

Provisional consent

I, _____, in my capacity as principal at the following school:
_____ do hereby give provisional consent for the researcher to
access the Grade 10 and 11 students in my school during Term Two in 2011.

I understand that my provisional consent only holds should I be provided with a copy of the
researcher's ethical clearance form.

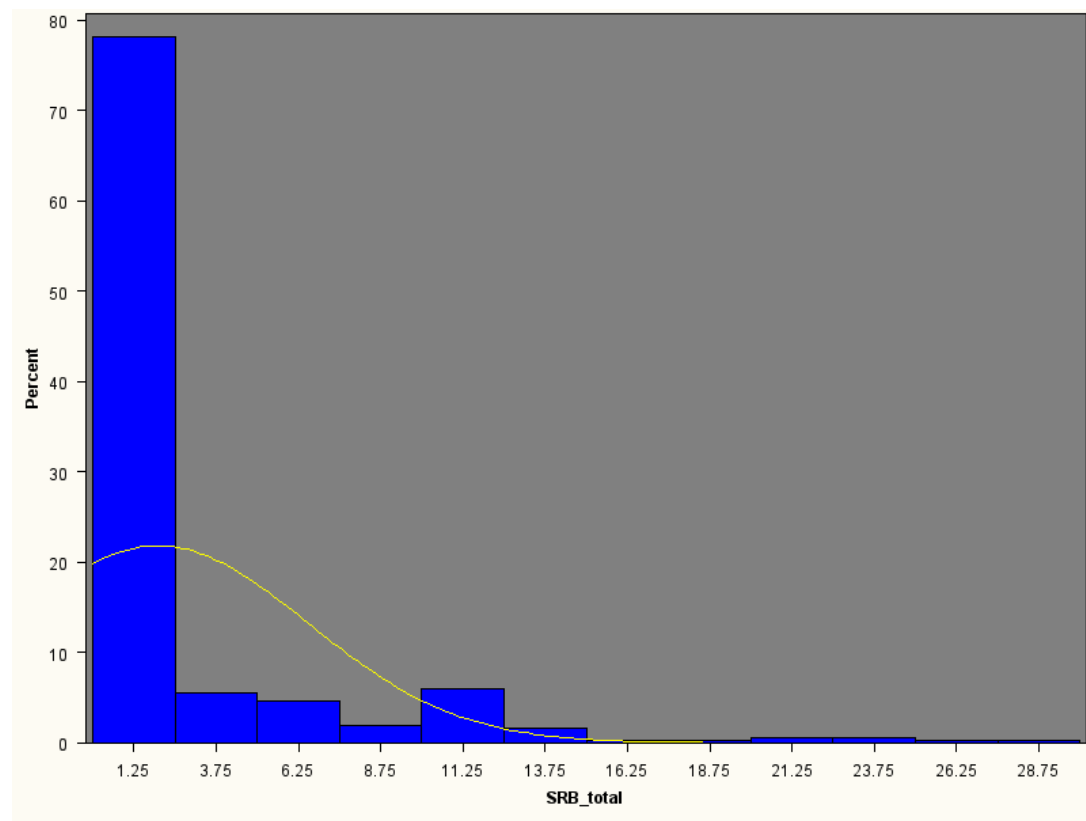
Signed: _____

Date: _____

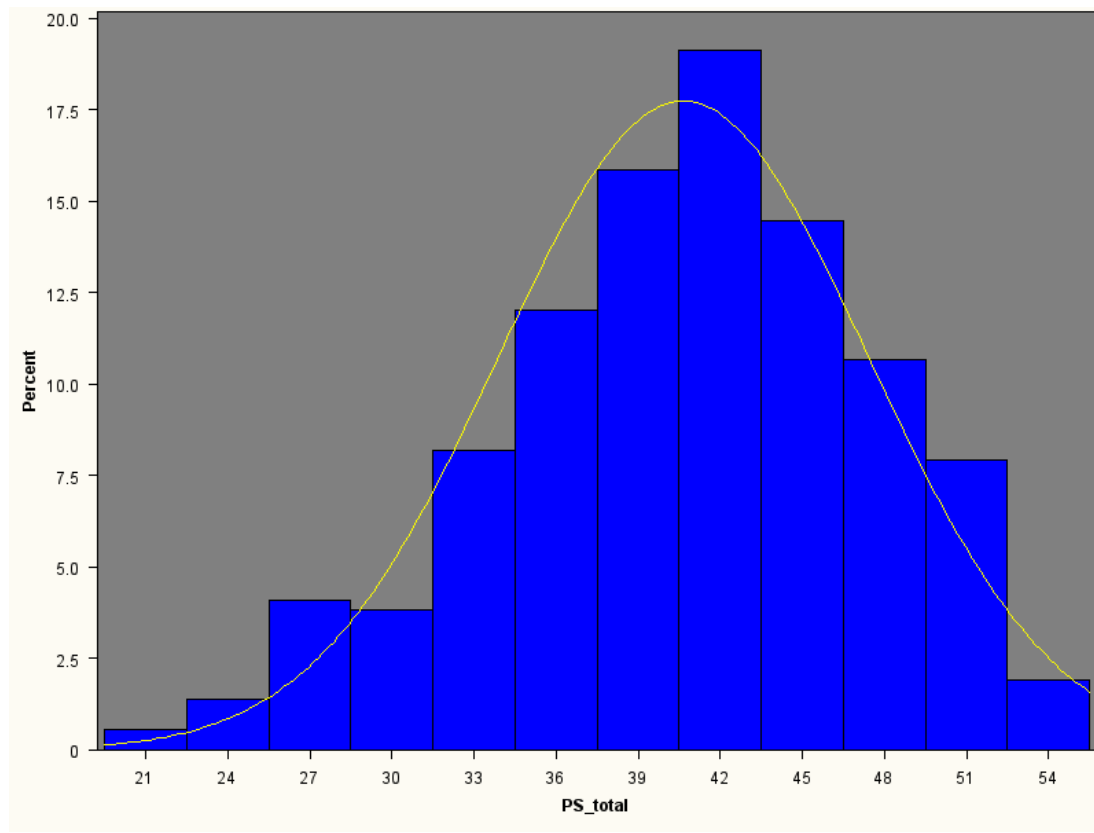
Appendix H

Distribution analyses – histograms and Kolmogorov-Smirnov Goodness-of-fit results

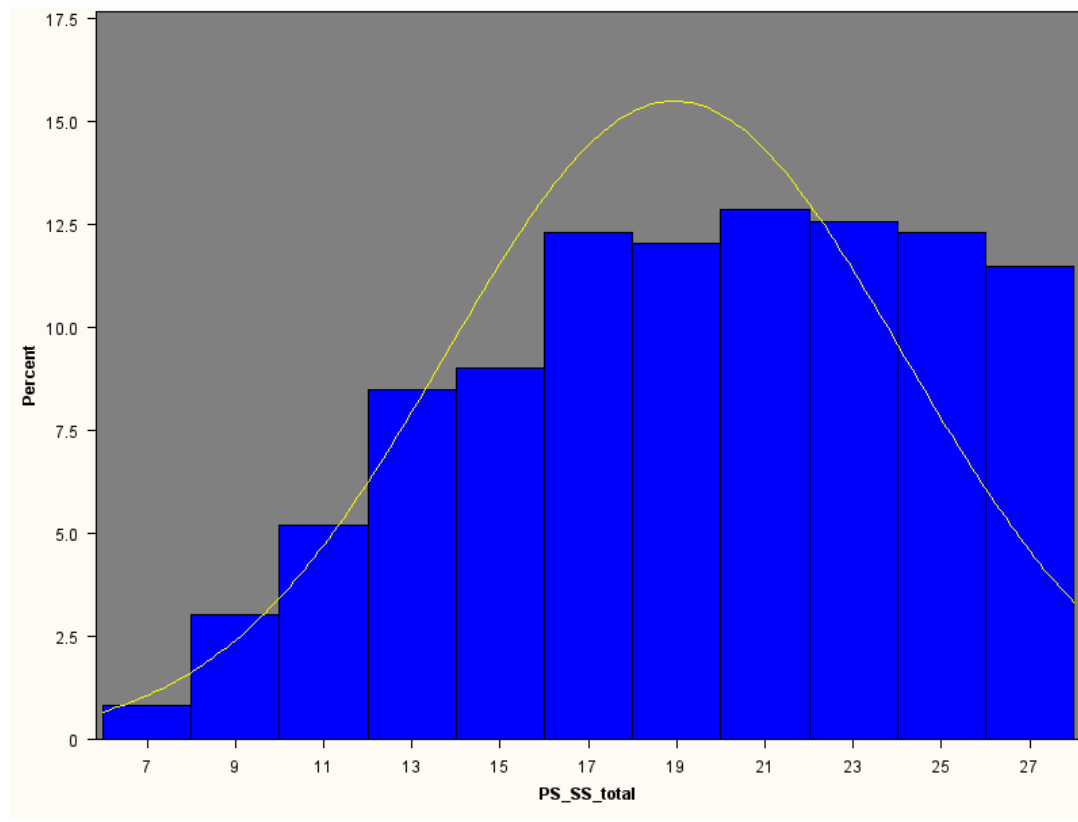
Sexual risk behavior



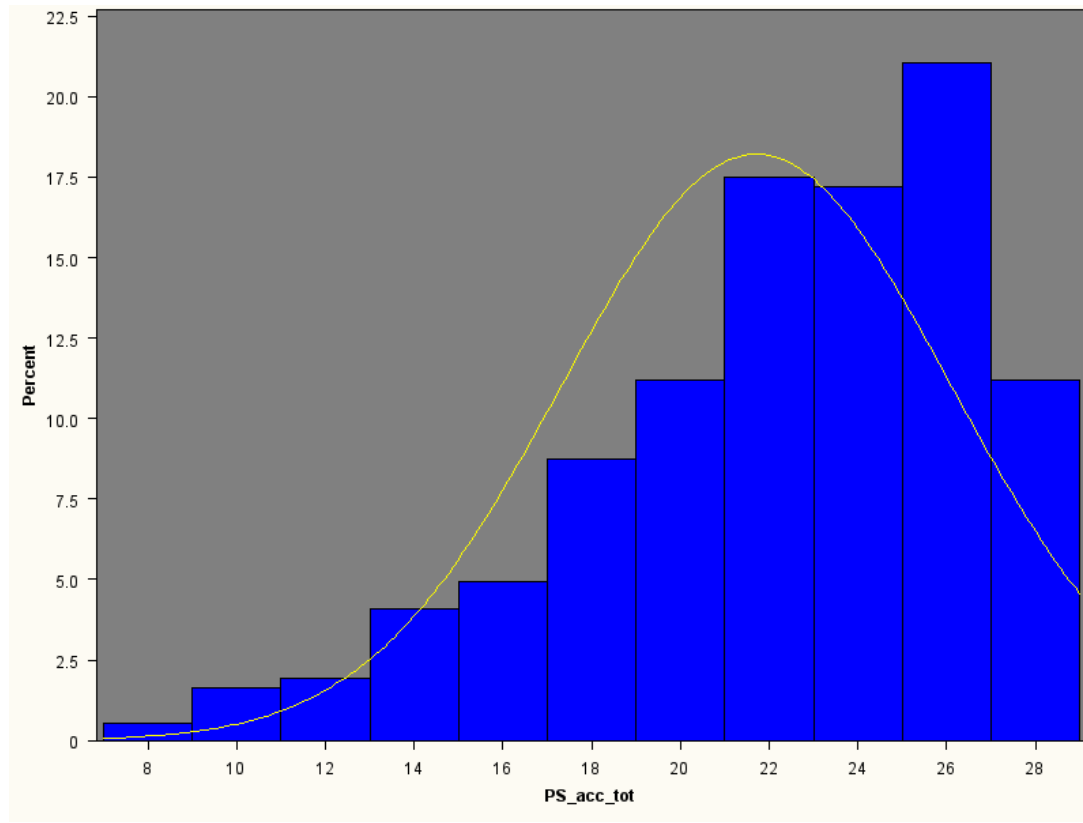
Test	D-value	p-value : Pr > D
Kolmogorov - Smirnov	0.4432842	<0.010

PSI total

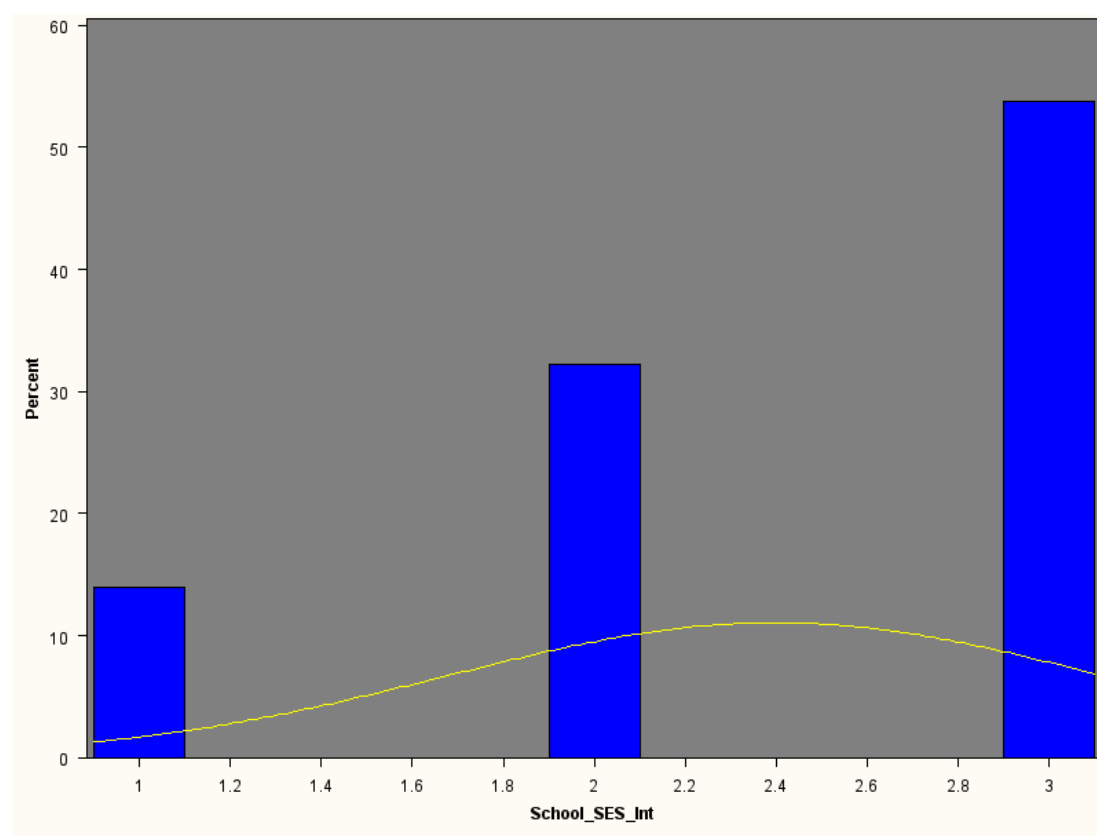
Test	D-value	p-value : Pr > D
Kolmogorov - Smirnov	0.06241662	<0.010

PSI Supervision/Strictness score

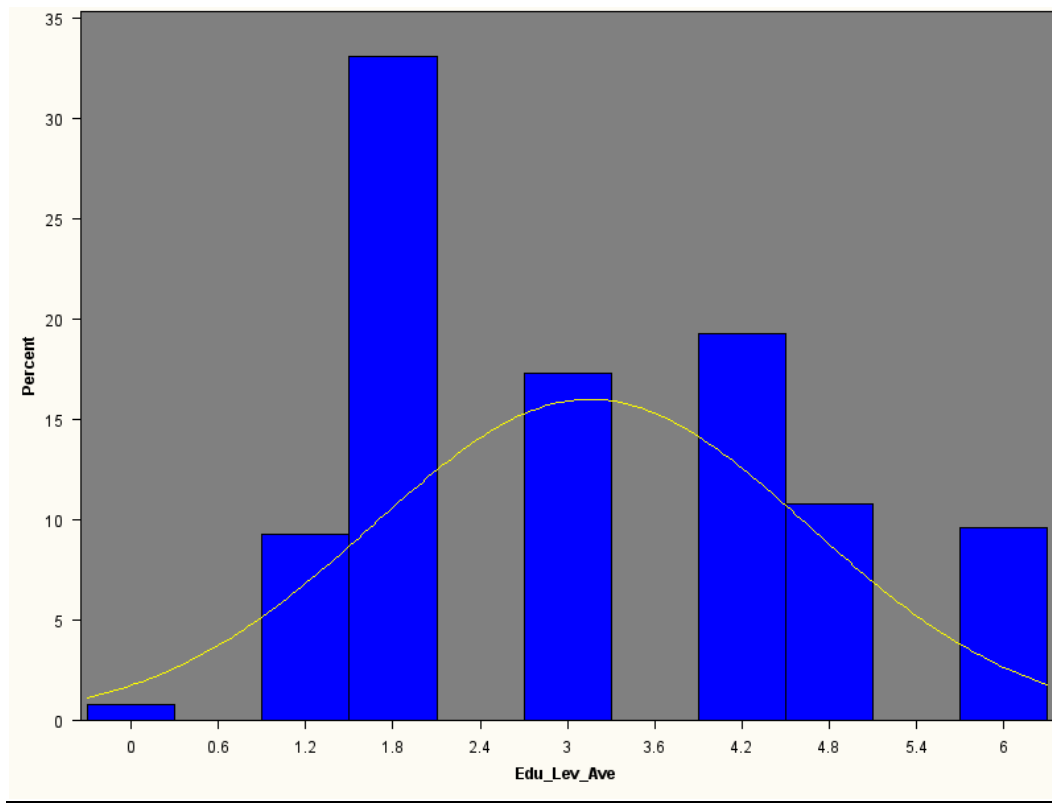
Test	D-value	p-value : Pr > D
Kolmogorov - Smirnov	0.08753384	<0.010

PS Acceptance/Involvement score

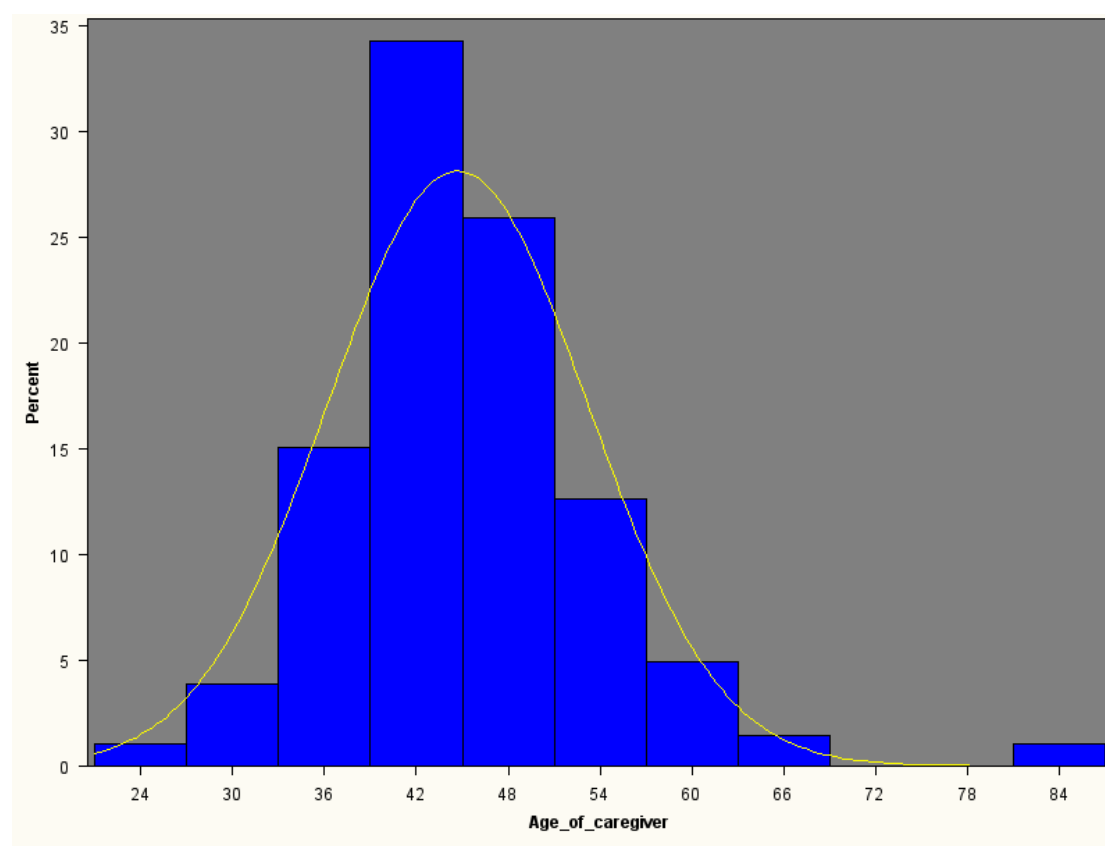
Test	D-value	p-value : Pr > D
Kolmogorov - Smirnov	0.11744356	<0.010

SES neighbourhood/school

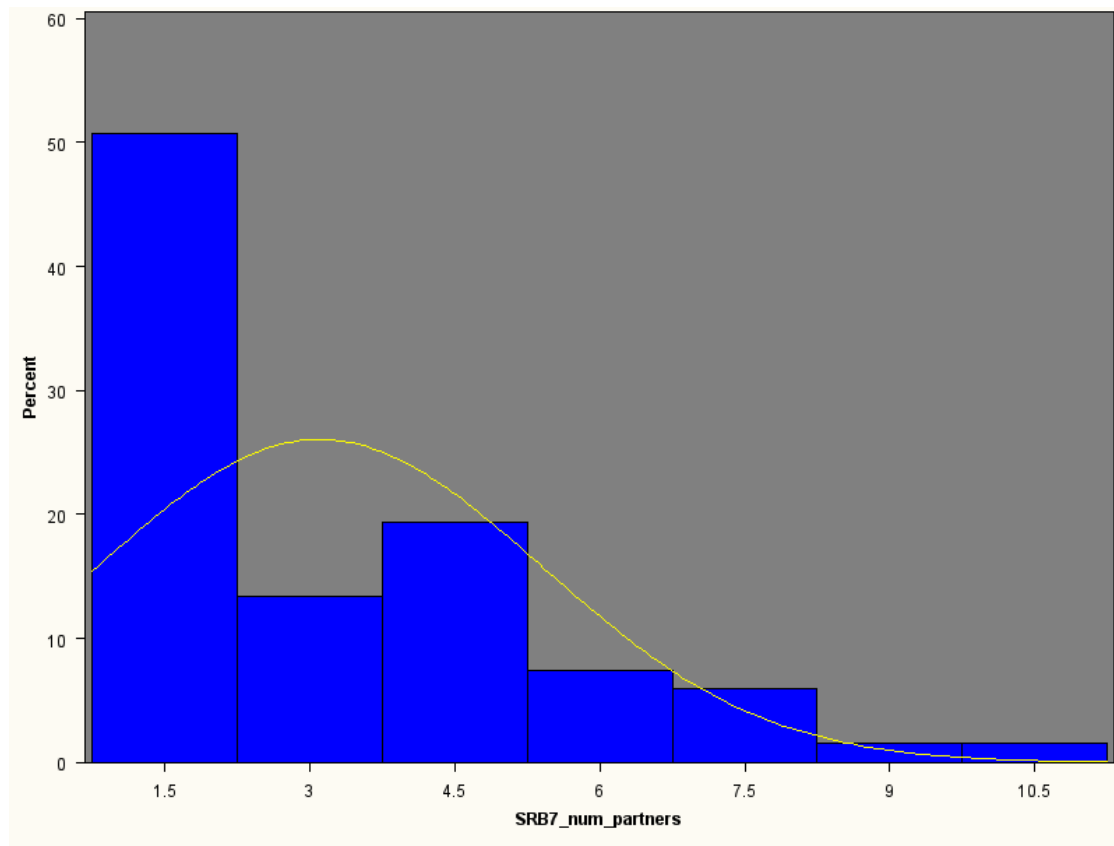
Test	D-value	p-value : Pr > D
Kolmogorov - Smirnov	0.3360136	<0.010

SES individual (parental education level)

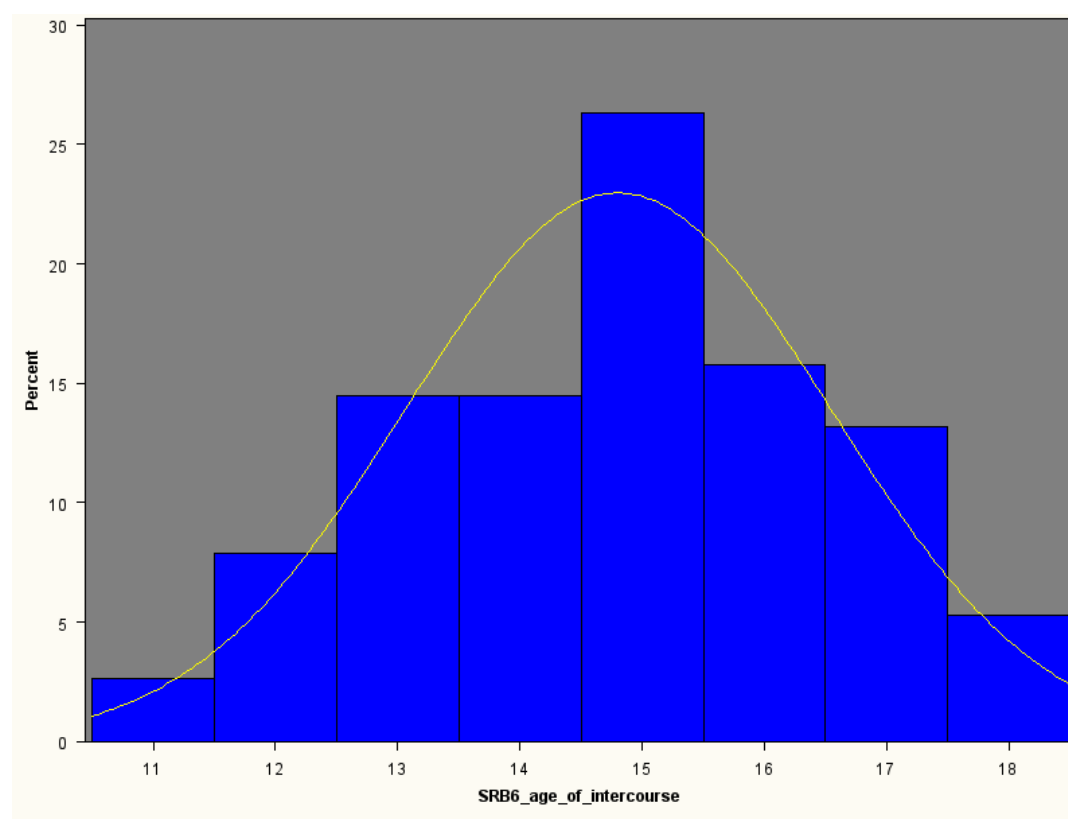
Test	D-value	p-value : Pr > D
Kolmogorov - Smirnov	0.21108677	<0.010

Age of the caregiver

Test	D-value	p-value : Pr > D
Kolmogorov - Smirnov	0.09675611	<0.010

Number of sexual partners

Test	D-value	p-value : Pr > D
Kolmogorov - Smirnov	0.19213621	<0.010

Age of sexual debut

Test	D-value	p-value : Pr > D
Kolmogorov - Smirnov	0.15052075	<0.010

Appendix I

Ethics Clearance Certificate

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

HUMAN RESEARCH ETHICS COMMITTEE (SCHOOL OF HUMAN & COMMUNITY DEVELOPMENT)

CLEARANCE CERTIFICATE

PROTOCOL NUMBER: MACC/11/011 IH

PROJECT TITLE:

HIV-related sexual risk behavior, parenting styles and SES in South African adolescents.

**INVESTIGATORS
DEPARTMENT**

Westcott Alexandra
Psychology

DATE CONSIDERED

23/03/11

DECISION OF COMMITTEE*

Approved

This ethical clearance is valid for 2 years and may be renewed upon application

DATE: 19 May 2011

CHAIRPERSON
(Professor M. Lucas)



cc Supervisor:

Mr. Jarrod Payne
Psychology

DECLARATION OF INVESTIGATOR (S)

To be completed in duplicate and one copy returned to the Secretary, Room 100015, 10th floor, Senate House, University.

I/we fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure be contemplated from the research procedure, as approved, I/we undertake to submit a revised protocol to the Committee.

This ethical clearance will expire on 31 December 2013

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES
